

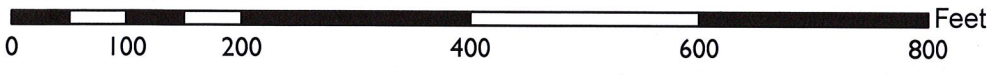
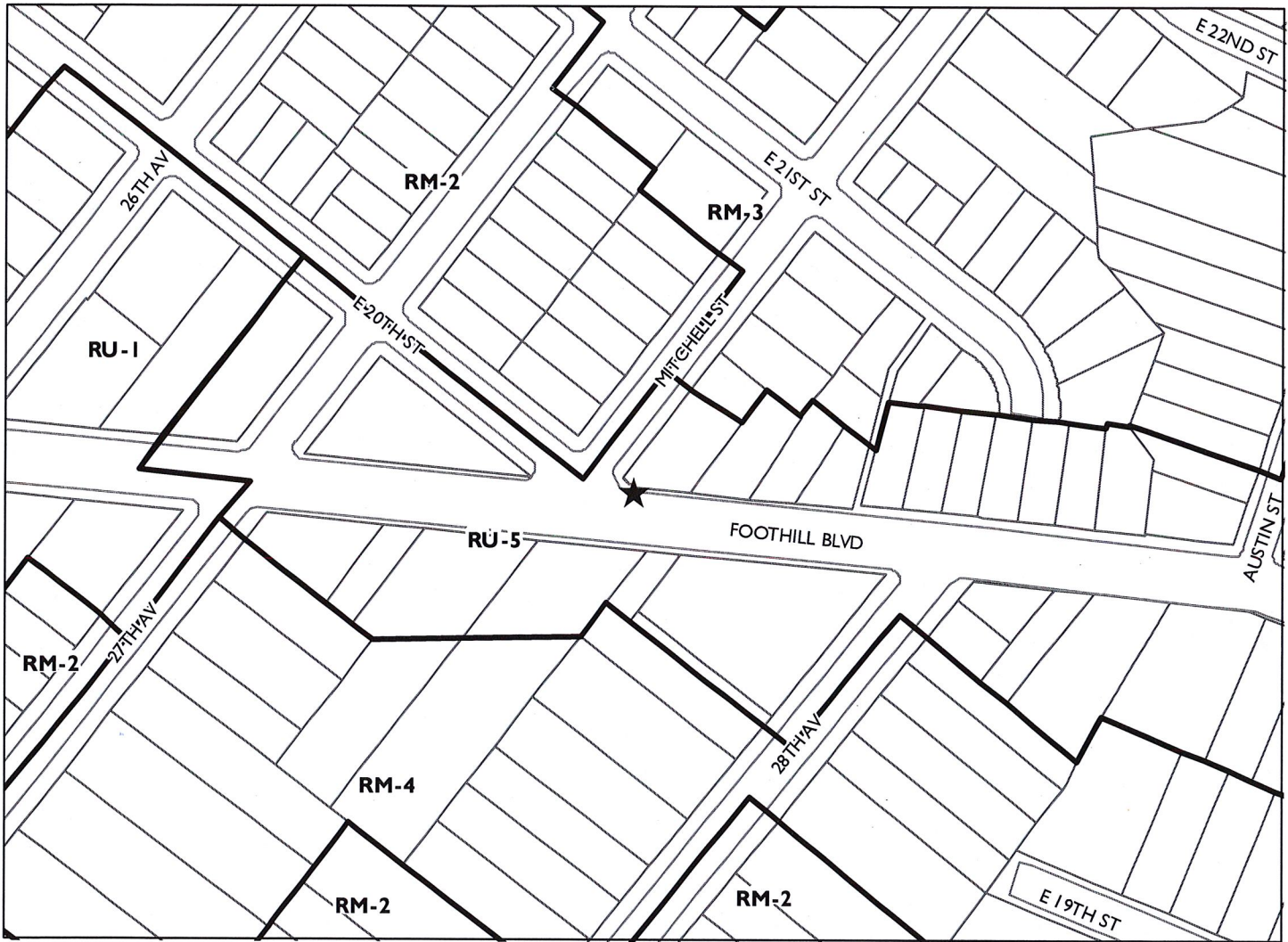
Location:	Utility guy pole in sidewalk adjacent to: 2750 Foothill Boulevard (see map on reverse)
Assessor's Parcel Number:	Adjacent to: 026 -0740-032-01
Proposal:	To establish a telecommunications facility, to enhance existing wireless service, by attaching an antenna and equipment to an existing wooden utility guy pole located in the public right-of-way (sidewalk).
Applicant / Phone Number:	Ana Gomez/Black&Veatch + Extenet (for: T-Mobile) (913) 458-9148
Owner:	Joint Pole Authority (JPA) including PG&E
Planning Permits Required:	Major Conditional Use Permit with additional findings for Monopole Telecommunications Facility; Regular Design Review with additional findings for Monopole Telecommunications Facility
General Plan:	Urban Residential
Zoning:	RU-5 Urban Residential Zone
Environmental Determination:	Exempt, Section 15301 of the State CEQA Guidelines: Existing Facilities; Exempt, Section 15302: Replacement or Reconstruction; Exempt, Section 15303: New Construction of Small Structures; Section 15183: Projects Consistent with a Community Plan, General Plan or Zoning
Historic Status:	Non-historic property
City Council District:	5
Date Filed:	October 20, 2016
Action to be Taken:	Approve with conditions
Finality of Decision:	<i>Appealable to City Council within 10 days</i>
For Further Information:	Contact case planner Aubrey Rose, AICP at (510) 238-2071 or arose@oaklandnet.com

SUMMARY

The applicant requests Planning Commission approval of a Major Conditional Use Permit and Regular Design Review with additional findings to establish a Monopole Telecommunications Facility (“small cell site”). The purpose is to enhance existing service. The project involves attaching an antenna and equipment to a wooden utility guy pole located on a sidewalk in the public right-of-way (sidewalk).

Staff recommends approval, subject to conditions, as described in this report.

CITY OF OAKLAND PLANNING COMMISSION



Case File: PLN16323

Applicant: Ana Gomez / Black & Veatch & Extenet (for: T-Mobile)

Address: Utility guy pole in sidewalk adjacent to 2750 Foothill Boulevard

Zone: RU-5

BACKGROUND

For several years in the City of Oakland, telecommunications carriers have proposed facility installation within the public right-of-way, instead of private property. These facilities typically consist of antennas and associated equipment attached to utility poles or street light poles. Poles are often replaced with replicas for technical purposes. The main purpose is to enhance existing service, given increasing technological demands for bandwidth, through new technology and locational advantages. The City exercises zoning jurisdiction over such projects in response to a 2009 State Supreme Court case decision (*Sprint v. Palos Verdes Estates*). Pursuant to the Planning Code, utility or joint pole authority (JPA) sites are classified by staff as “Macro Facilities,” and street light pole sites (lamps, not traffic signals) as “Monopole Facilities.” For JPA poles, only Design Review approval may be required, as opposed to Design Review and a Conditional Use Permit, for example. For non-JPA pole sites, such as City light poles, projects also require review by the City’s Public Works Agency (PWA) and Real Estate Division, and involve other considerations such as impacts to historical poles. The PWA may also review projects involving street lights. In either case, the practice has been to refer all such projects to the Planning Commission for decision when located in or near a residential zone.

Several projects for new DAS (distributed antenna services) facilities have come before the Planning Commission for a decision and have been installed throughout the Oakland Hills. Some applications have been denied due to view obstructions or proximity to residences. Improved practices for the processing of all types of sites incorporating Planning Commission direction have been developed as a result. Conditions of approval typically attach requirements such as painting and texturing of approved components to more closely match utility poles in appearance. Approvals do not apply to any replacement project should the poles be removed for any reason. As with sites located on private property, the Federal Government precludes cities from denying an application on the basis of emissions concerns if a satisfactory emissions report is submitted. More recent Federal changes have streamlined the process to service existing facilities.

Currently, telecommunications carriers are in the process of attempting to deploy “small cell sites.” These projects also involve attachment of antennas and equipment at public right-of-way facilities such as poles or lights for further enhancement of services. However, components are now somewhat smaller in size than in the past. Also, sites tend to be located in flatland neighborhoods and Downtown where view obstructions are less likely to be an issue. Good design and placement is given full consideration nonetheless, especially with the greater presence of historic structures in Downtown. Additionally, given the sheer multitude of applications, and, out of consideration for Federal requirements for permit processing timelines, staff may develop alternatives to traditional staffing and agendizing.

TELECOMMUNICATIONS BACKGROUND

Limitations on Local Government Zoning Authority under the Telecommunications Act of 1996

Section 704 of the Telecommunications Act of 1996 (TCA) provides federal standards for the siting of “Personal Wireless Services Facilities.” “Personal Wireless Services” include all commercial mobile services (including personal communications services (PCS), cellular radio mobile services, and paging); unlicensed wireless services; and common carrier wireless exchange access services. Under Section 704, local zoning authority over personal wireless services is preserved such that the FCC is prevented from preempting local land use decisions; however, local government zoning decisions are still restricted by several provisions of federal law. Specifically:

- Under Section 253 of the TCA, no state or local regulation or other legal requirement can prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.
- Further, Section 704 of the TCA imposes limitations on what local and state governments can do. Section 704 prohibits any state and local government action which unreasonably discriminates among personal wireless providers. Local governments must ensure that its wireless ordinance does not contain requirements in the form of regulatory terms or fees which may have the “effect” of prohibiting the placement, construction, or modification of personal wireless services.
- Section 704 also preempts any local zoning regulation purporting to regulate the placement, construction and modification of personal wireless service facilities on the basis, either directly or indirectly, on the environmental effects of radio frequency emissions (RF) of such facilities, which otherwise comply with Federal Communication Commission (FCC) standards in this regard. (See 47 U.S.C. Section 332(c)(7)(B)(iv) (1996)). This means that local authorities may not regulate the siting or construction of personal wireless facilities based on RF standards that are more stringent than those promulgated by the FCC.
- Section 704 mandates that local governments act upon personal wireless service facility siting applications to place, construct, or modify a facility within a reasonable time (See 47 U.S.C.332(c)(7)(B)(ii) and FCC Shot Clock ruling setting forth “reasonable time” standards for applications deemed complete).
- Section 704 also mandates that the FCC provide technical support to local governments in order to encourage them to make property, rights-of-way, and easements under their jurisdiction available for the placement of new spectrum-based telecommunications services. This proceeding is currently at the comment stage.

For more information on the FCC’s jurisdiction in this area, contact Steve Markendorff, Chief of the Broadband Branch, Commercial Wireless Division, Wireless Telecommunications Bureau, at (202) 418-0640 or e-mail "smarkend@fcc.gov".

SITE DESCRIPTION

The project site consists of a wooden guy utility pole (29-feet in height) located in the public right-of-way (sidewalk, towards the curb). The guy pole hosts a City light standard (“Cobrahead”) over the street and one service drop from a utility pole on the opposite side of the street. It contains some graffiti towards its base. Guy poles generally provide support to utility poles and service drops. The pole is located in front of an auto repair business on a angled corner at a four-way intersection. The business, likely a former service station, contains a fenced open work area and monument sign towards the corner and a small building set back to the interior of the lot. The neighborhood consists of one and two story residences with some businesses and upper story residences.

PROJECT DESCRIPTION

The proposal is to establish a Monopole Telecommunications Facility (“small cell site”). The project would involve attaching an antenna and equipment to the existing wooden utility guy pole. One antenna would be installed to project over the street beneath the City light standard at 18-feet to 21’-3”. Various equipment would be installed projecting over the curb towards the corner between 7’-4” to approximately 13’-11” in height.

GENERAL PLAN ANALYSIS

The site is located in a Urban Residential area under the General Plan's Land Use and Transportation Element (LUTE). The intent of the Urban Residential area is: *"to create, maintain, and enhance areas of the City that are appropriate for multi-unit, mid-rise or high-rise residential structures in locations with good access to transportation and other services."* Given residential customers' increasing reliance upon cellular service for phone and wi-fi, the proposal for a monopole telecommunications facility that is not adjacent to a primary living space or an historic structure conforms to this intent.

Staff therefore finds the proposal, as conditioned, to conform to the General Plan.

ZONING ANALYSIS

The site is located in the RU-5 Urban Residential Zone. The intent of the RU-5 Zone is: *"to create, maintain, and enhance areas of the City that are appropriate for multi-unit, mid-rise, and high rise residential structures and ground floor neighborhood businesses on the City's major corridors."*

Telecommunications facilities on non-JPA poles when located in residential zones require a Major Conditional Use Permit (Planning Commission decision) and Regular Design Review with additional findings. New wireless telecommunications facilities may also be subject to a Site Alternatives Analysis, Site Design Alternatives Analysis, and a satisfactory radio-frequency (RF) emissions report. Staff analyzes the proposal in consideration of these requirements in the 'Key Issues and Impacts' section of this report. Given residential and other customers increasing reliance upon cellular service for phone and wi-fi, the proposal for a monopole telecommunications facility that is not adjacent to a primary living space or historic structure conforms to this intent.

Staff finds the proposal, as conditioned, to conform to the Planning Code.

ENVIRONMENTAL DETERMINATION

The California Environmental Quality Act (CEQA) Guidelines categorically exempts specific types of projects from environmental review. Section 15301 exempts projects involving 'Existing Facilities;' Section 15302 exempts projects involving 'Replacement or Reconstruction;' and, Section 15303 exempts projects involving 'Construction of Small Structures.' The proposal fits all of these descriptions. The project is also subject to Section 15183 for 'Projects consistent with a community plan, general plan or zoning.' The project is therefore exempt from further Environmental Review.

KEY ISSUES AND IMPACTS

The proposal to establish a monopole telecommunications facility is subject to the following Planning Code development standards, which are followed by staff's analysis in relation to this application:

17.128.080 Monopole Telecommunications Facilities.

A. General Development Standards for Monopole Telecommunications Facilities.

1. Applicant and owner shall allow other future wireless communications companies including public and quasi-public agencies using similar technology to collocate antenna equipment and facilities on the monopole unless specific technical or other constraints, subject to independent verification, at the applicant's expense, at the discretion of the City of Oakland Zoning Manager, prohibit said collocation. Applicant and other wireless carriers shall provide a mechanism for the construction and maintenance of shared facilities and infrastructure and shall provide for equitable sharing of cost in accordance with industry standards. Construction of future facilities shall not interrupt or interfere with the continuous operation of applicant's facilities.

2. The equipment shelter or cabinet must be concealed from public view or made compatible with the architecture of the surrounding structures or placed underground. The shelter or cabinet must be regularly maintained.
3. When a monopole is in a Residential Zone or adjacent to a residential use, it must be set back from the nearest residential lot line a distance at least equal to its total height.
4. In all zones other than the D-CE-5, D-CE-6, IG, CIX-2, and IO Zones, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may be increased from the otherwise required maximum height to forty-five (45) feet upon the granting of a Conditional Use Permit (see Chapter 17.134 for the Conditional Use Permit Procedure).
5. In the D-CE-5, D-CE-6, CIX-2, and IO Zones, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may be increased from the otherwise required maximum height to eighty (80) feet upon the granting of a Conditional Use Permit (see Chapter 17.134 for the Conditional Use Permit Procedure).
6. In the IG Zone, the maximum height of Monopole Telecommunications Facilities and connecting appurtenances may reach a height of forty-five (45) feet. These facilities may reach a height of eighty (80) feet upon the granting of Regular Design Review approval (see Chapter 17.136 for the Design Review Procedure).
7. The applicant shall submit written documentation demonstrating that the emissions from the proposed project are within the limits set by the Federal Communications Commission.
8. Antennas may not extend more than fifteen (15) feet above their supporting structure.

Draft conditions of approval attached to this report require: allowance for collocation; painting and texturing antenna and all equipment to match pole color and finish; construction of a residential facility on the adjacent lot would render the telecommunications facility nonconforming; and, the facility would not exceed the existing pole height of 29-feet.

17.128.110 Site location preferences.

New wireless facilities shall generally be located on the following properties or facilities in order of preference:

- A. Co-located on an existing structure or facility with existing wireless antennas.
- B. City-owned properties or other public or quasi-public facilities.
- C. Existing commercial or industrial structures in Nonresidential Zones (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).
- D. Existing commercial or industrial structures in Residential Zones, HBX Zones, or the DCE-3 or D-CE-4 Zones.
- E. Other Nonresidential uses in Residential Zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.
- F. Residential uses in Nonresidential Zones (excluding all HBX Zones and the D-CE-3 and D-CE-4 Zones).
- G. Residential uses in Residential Zones, HBX Zones, or the D-CE-3 or D-CE-4 Zones.

Facilities locating on an A, B or C ranked preference do not require a site alternatives analysis. Facilities proposing to locate on a D through G ranked preference, inclusive, must submit a site alternatives analysis as part of the required application materials. A site alternatives analysis shall, at a minimum, consist of: a. The identification of all A, B and C ranked preference sites within one thousand (1,000) feet of the proposed location. If more than three (3) sites in each preference order exist, the three such closest to the proposed location shall be required. b. Written evidence indicating why each such identified alternative cannot be used. Such evidence shall be in sufficient detail that independent verification, at the applicant's expense, could be obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. refusal to lease, inability to provide utilities).

A 'site alternatives analysis' is not required because the proposal conforms to 'B' as it would be located on a quasi-public facility (utility guy pole with City light). Nonetheless, the applicant has submitted an analysis which is attached to this report (Attachment E).

17.128.120 Site design preferences.

New wireless facilities shall generally be designed in the following order of preference:

- A. Building or structure mounted antennas completely concealed from view.**
- B. Building or structure mounted antennas set back from roof edge, not visible from public right-of way.**
- C. Building or structure mounted antennas below roof line (facade mount, pole mount) visible from public right-of-way, painted to match existing structure.**
- D. Building or structure mounted antennas above roof line visible from public right-of-way.**
- E. Monopoles.**
- F. Towers.**

Facilities designed to meet an A or B ranked preference do not require a site design alternatives analysis. Facilities designed to meet a C through F ranked preference, inclusive, must submit a site design alternatives analysis as part of the required application materials. A site design alternatives analysis shall, at a minimum, consist of: a. Written evidence indicating why each such higher preference design alternative cannot be used. Such evidence shall be in sufficient detail that independent verification could be obtained if required by the City of Oakland Zoning Manager. Evidence should indicate if the reason an alternative was rejected was technical (e.g. incorrect height, interference from existing RF sources, inability to cover required area) or for other concerns (e.g. inability to provide utilities, construction or structural impediments).

The proposal most closely conforms to 'C' (structured mounted antennas visible from public right-of-way), and the applicant has submitted a satisfactory 'site design alternatives analysis' (Attachment E).

17.128.130 Radio frequency emissions standards.

The applicant for all wireless facilities, including requests for modifications to existing facilities, shall submit the following verifications:

- a. With the initial application, a RF emissions report, prepared by a licensed professional engineer or other expert, indicating that the proposed site will operate within the current acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.**
- b. Prior to commencement of construction, a RF emissions report indicating the baseline RF emissions condition at the proposed site.**
- c. Prior to final building permit sign off, an RF emissions report indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.**

A satisfactory 'RF emissions report' is attached to this report (Attachment F).

Analysis

The proposed site design would not be situated on historic pole or structure, create a view obstruction, or be directly adjacent to a primary living space such as a living room or bedroom window. While several classic homes are located in the neighborhood, the site is not located within an Area of Importance in terms of historic building ratings. The corridor allows a 45-foot height limit and future development of more than two-stories at the adjacent site is possible, similar to a nearby building on the opposite side of the street. If this were to occur, there is no clear indication that the proposed facility would be a future obstruction to a living space. However, residential development would render the facility nonconforming for not meeting a required 1:1 height/setback standard from residences, and if removed could therefore

not be replaced at the same location without a Variance permit. Use of this pole precludes placement of a new pole or use of a pole close to an existing upper story residence and therefore is “visually preferable.” Staff has also requested in general for these projects that the applicant provide a “slimmer” design consisting of tucking the antenna in closer to the pole. The applicant responded that this was not feasible due to the technological requirements by the Public Utilities Commission (Attachment G). Conditions of approval do require painting and texturizing all appurtenances for camouflaging with pole colors and finishes, and graffiti removal. Staff, therefore, finds the proposal to provide an essential service with a least-intrusive possible design.

In conclusion, staff recommends approval subject to recommended Conditions of Approval.

RECOMMENDATIONS:

1. Affirm staff’s environmental determination.
2. Approve the Major Conditional Use Permit and Regular Design Review subject to the attached Findings and Conditions of Approval.

Prepared by:




AUBREY ROSE, AICP
Planner III

Reviewed by:



SCOTT MILLER
Zoning Manager

Approved for forwarding to the
City Planning Commission:



DARIN RANELLETTI, Interim Director
Planning and Building Department

ATTACHMENTS:

- A. Findings
- B. Conditions of Approval
- C. Plans
- D. Applicant’s Photo-Simulations
- E. Site Alternatives Analysis/Site Design Alternatives Analysis dated October 20, 2016
- F. RF Emissions Report by Hammett & Edison, Inc. dated October 10, 2016
- G. CPUC Compliance Letter dated November 30, 2016
- H. Applicant-proof of public notification posting

ATTACHMENT A: FINDINGS

This proposal meets the required findings under General use permit criteria (OMC Sec. 17.134.050), Conditional Use Permit Criteria for Monopole Telecommunications Facilities (OMC Sec. 17.128.080(C)), Regular Design Review Criteria for Nonresidential Facilities (OMC Sec. 17.136.050(B)), and Design Review Criteria for Monopole Telecommunications Facilities (OMC Sec. 17.128.080(B)), as set forth below. Required findings are shown in **bold** type; explanations as to why these findings can be made are in normal type.

GENERAL USE PERMIT CRITERIA (OMC SEC. 17.134.050)

A. That the location, size, design, and operating characteristics of the proposed development will be compatible with and will not adversely affect the livability or appropriate development of abutting properties and the surrounding neighborhood, with consideration to be given to harmony in scale, bulk, coverage, and density; to the availability of civic facilities and utilities; to harmful effect, if any, upon desirable neighborhood character; to the generation of traffic and the capacity of surrounding streets; and to any other relevant impact of the development;

The proposed site design would not be situated on historic pole or structure, create a view obstruction, or be directly adjacent to a primary living space such as a living room or bedroom window. While several classic homes are located in the neighborhood, the site is not located within an Area of Importance in terms of historic building ratings. The corridor allows a 45-foot height limit and future development of more than two-stories at the adjacent site is possible, similar to a nearby building on the opposite side of the street. If this were to occur, there is no clear indication that the proposed facility would be a future obstruction to a living space. However, residential development would render the facility nonconforming for not meeting a required 1:1 height/setback standard from residences, and if removed could therefore not be replaced at the same location without a Variance permit. The proposed facility consists of a design that is as small as technologically possible. Conditions of approval do require painting and texturizing all appurtenances for camouflaging with pole colors and finishes.

B. That the location, design, and site planning of the proposed development will provide a convenient and functional living, working, shopping, or civic environment, and will be as attractive as the nature of the use and its location and setting warrant;

The proposed site design would not be situated on historic pole or structure, create a view obstruction, or be directly adjacent to a primary living space such as a living room or bedroom window. While several classic homes are located in the neighborhood, the site is not located within an Area of Importance in terms of historic building ratings. The corridor allows a 45-foot height limit and future development of more than two-stories at the adjacent site is possible, similar to a nearby building on the opposite side of the street. If this were to occur, there is no clear indication that the proposed facility would be a future obstruction to a living space. However, residential development would render the facility nonconforming for not meeting a required 1:1 height/setback standard from residences, and if removed could therefore not be replaced at the same location without a Variance permit. The proposed facility consists of a design that is as small as technologically possible. Conditions of approval do require painting and texturizing all appurtenances for camouflaging with pole colors and finishes.

C. That the proposed development will enhance the successful operation of the surrounding area in its basic community functions, or will provide an essential service to the community or region;

The proposed site design would not be situated on historic pole or structure, create a view obstruction, or be directly adjacent to a primary living space such as a living room or bedroom window. While several

classic homes are located in the neighborhood, the site is not located within an Area of Importance in terms of historic building ratings. The corridor allows a 45-foot height limit and future development of more than two-stories at the adjacent site is possible, similar to a nearby building on the opposite side of the street. If this were to occur, there is no clear indication that the proposed facility would be a future obstruction to a living space. However, residential development would render the facility nonconforming for not meeting a required 1:1 height/setback standard from residences, and if removed could therefore not be replaced at the same location without a Variance permit. The proposed facility consists of a design that is as small as technologically possible. Conditions of approval do require painting and texturizing all appurtenances for camouflaging with pole colors and finishes.

D. That the proposal conforms to all applicable regular design review criteria set forth in the regular design review procedure at Section 17.136.050

The proposal conforms to required design review findings as describe in following sections of this Attachment.

E. That the proposal conforms in all significant respects with the Oakland General Plan and with any other applicable guidelines or criteria, district plan or development control map which has been adopted by the Planning Commission or City Council.

The site is located in a Urban Residential area under the General Plan's Land Use and Transportation Element (LUTE). The intent of the Urban Residential area is: *"to create, maintain, and enhance areas of the City that are appropriate for multi-unit, mid-rise or high-rise residential structures in locations with good access to transportation and other services."* Given residential customers' increasing reliance upon cellular service for phone and wi-fi, the proposal for a monopole telecommunications facility that is not adjacent to a primary living space or an historic structure conforms to this intent.

F. For proposals involving a One- or Two-Family Residential Facility: If the conditional use permit concerns a regulation governing maximum height, minimum yards, maximum lot coverage, or maximum floor area ratio, the proposal also conforms with at least one of the following additional criteria:

- 1. The proposal when viewed in its entirety will not adversely impact abutting residences to the side, rear, or directly across the street with respect to solar access, view blockage and privacy to a degree greater than that which would be possible if the residence were built according to the applicable regulation, and, for conditional use permits that allow height increases, the proposal provides detailing, articulation or other design treatments that mitigate any bulk created by the additional height; or**
- 2. At least sixty percent (60%) of the lots in the immediate context are already developed and the proposal would not exceed the corresponding as-built condition on these lots, and, for conditional use permits that allow height increases, the proposal provides detailing, articulation or other design treatments that mitigate any bulk created by the additional height. The immediate context shall consist of the five (5) closest lots on each side of the project site plus the ten (10) closest lots on the opposite side of the street (see illustration I-4b); however, the Director of City Planning may make an alternative determination of immediate context based on specific site conditions. Such determination shall be in writing and included as part of any decision on any conditional use permit.**

This finding is inapplicable: the proposal does not involve a house or duplex.

1. The project must meet the special design review criteria listed in Subsection B. of this Section.

The proposal conforms to required design review findings as describe in following sections of this Attachment.

2. Monopoles should not be located any closer than one thousand five hundred (1,500) feet from existing monopoles unless technologically required or visually preferable.

Use of this pole precludes placement of a new pole or use of a pole close to an existing upper story residence and therefore is "visually preferable."

3. The proposed project must not disrupt the overall community character.

The proposed project utilizes an existing facility not adjacent to a residence to enhance existing service.

4. If a major conditional use permit is required, the Planning Director or the Planning Commission may request independent expert review regarding site location, collocation and facility configuration. Any party may request that the Planning Commission consider making such request for independent expert review.

a. If there is any objection to the appointment of an independent expert engineer, the applicant must notify the Planning Director within ten (10) days of the Commission request. The Commission will hear arguments regarding the need for the independent expert and the applicant's objection to having one appointed. The Commission will rule as to whether an independent expert should be appointed.

b. Should the Commission appoint an independent expert, the Commission will direct the Planning Director to pick an expert from a panel of licensed engineers, a list of which will be compiled, updated and maintained by the Planning Department.

c. No expert on the panel will be allowed to review any materials or investigate any application without first signing an agreement under penalty of perjury that the expert will keep confidential any and all information learned during the investigation of the application. No personnel currently employed by a telecommunication company are eligible for inclusion on the list.

d. An applicant may elect to keep confidential any proprietary information during the expert's investigation. However, if an applicant does so elect to keep confidential various items of proprietary information, that applicant may not introduce the confidential proprietary information for the first time before the Commission in support of the application.

e. The Commission shall require that the independent expert prepare the report in a timely fashion so that it will be available to the public prior to any public hearing on the application.

f. Should the Commission appoint an independent expert, the expert's fees will be paid by the applicant through the application fee, imposed by the City.

The proposal does require a Major Conditional Use Permit; should the Planning Commission require expert independent review, the application shall first obtain and then return for a decision.

REGULAR DESIGN REVIEW CRITERIA FOR NONRESIDENTIAL FACILITIES (OMC SEC. 17.136.050(B))

1. That the proposal will help achieve or maintain a group of facilities which are well related to one another and which, when taken together, will result in a well-composed design, with consideration given to site, landscape, bulk, height, arrangement, texture, materials, colors, and appurtenances; the relation of these factors to other facilities in the vicinity; and the relation of the proposal to the total setting as seen from key points in the surrounding area. Only elements of design which have

some significant relationship to outside appearance shall be considered, except as otherwise provided in Section 17.136.060;

The attachment of a small antenna and equipment to a non-historic utility guy pole, painted and texturized to match the pole in appearance for camouflaging, will be the least intrusive design. The proposal would not create a view obstruction, be directly adjacent to a primary living space such as a living room or bedroom window, be ground mounted, or be located on an historic structure. The proposal will enhance essential services in an urbanized neighborhood.

2. That the proposed design will be of a quality and character which harmonizes with, and serves to protect the value of, private and public investments in the area;

The attachment of a small antenna and equipment to a non-historic utility guy pole, painted and texturized to match the pole in appearance for camouflaging, will be the least intrusive design. The proposal would not create a view obstruction, be directly adjacent to a primary living space such as a living room or bedroom window, be ground mounted, or be located on an historic structure. The proposal will enhance essential services in an urbanized neighborhood.

3. That the proposed design conforms in all significant respects with the Oakland General Plan and with any applicable design review guidelines or criteria, district plan, or development control map which have been adopted by the Planning Commission or City Council.

DESIGN REVIEW CRITERIA FOR MONOPOLE TELECOMMUNICATIONS FACILITIES
(OMC SEC. 17.128.080(B))

1. Collocation is to be encouraged when it will decrease visual impact and collocation is to be discouraged when it will increase negative visual impact.

Conditions of approval require that collocation be allowed.

2. Monopoles should not be sited to create visual clutter or negatively affect specific views.

The monopole involves the modification of an existing pole that does not front a residence.

3. Monopoles shall be screened from the public view wherever possible.

The monopole involves an existing pole with slimmest possible appurtenances to be painted and texturized to match the pole in terms of color and finish for camouflaging.

4. The equipment shelter or cabinet must be concealed from public view or made compatible with the architecture of the surrounding structures or placed underground. The shelter or cabinet must be regularly maintained.

Equipment will be attached to the existing pole and will be painted and texturized.

5. Site location and development shall preserve the preexisting character of the surrounding buildings and land uses and the zone district as much as possible. Wireless communication towers shall be integrated through location and design to blend in with the existing characteristics of the site to the extent practical. Existing on-site vegetation shall be preserved or improved, and disturbance of the existing topography shall be minimized, unless such disturbance would result in less visual impact of the site to the surrounding area.

The monopole involves modification of an existing pole that is not fronting a residence.

6. That all reasonable means of reducing public access to the antennas and equipment has been made, including, but not limited to, placement in or on buildings or structures, fencing, anti-climbing measures and anti-tampering devices.

The antenna will be painted and texturized matte silver to match the power line posts in appearance for camouflaging, will be the least intrusive design, as required by conditions of approval.

Attachment B: Conditions of Approval

1. **Approved Use**

The project shall be constructed and operated in accordance with the authorized use as described in the approved application materials, **staff report** and the approved plans **dated September 27, 2016 and submitted October 20, 2016**, as amended by the following conditions of approval and mitigation measures, if applicable (“Conditions of Approval” or “Conditions”).

2. **Effective Date, Expiration, Extensions and Extinguishment**

This Approval shall become effective immediately, unless the Approval is appealable, in which case the Approval shall become effective in ten calendar days unless an appeal is filed. Unless a different termination date is prescribed, this Approval shall expire **two calendar years** from the Approval date, or from the date of the final decision in the event of an appeal, unless within such period all necessary permits for construction or alteration have been issued, or the authorized activities have commenced in the case of a permit not involving construction or alteration. Upon written request and payment of appropriate fees submitted no later than the expiration date of this Approval, the Director of City Planning or designee may grant a one-year extension of this date, with additional extensions subject to approval by the approving body. Expiration of any necessary building permit or other construction-related permit for this project may invalidate this Approval if said Approval has also expired. If litigation is filed challenging this Approval, or its implementation, then the time period stated above for obtaining necessary permits for construction or alteration and/or commencement of authorized activities is automatically extended for the duration of the litigation.

3. **Compliance with Other Requirements**

The project applicant shall comply with all other applicable federal, state, regional, and local laws/codes, requirements, regulations, and guidelines, including but not limited to those imposed by the City’s Bureau of Building, Fire Marshal, and Public Works Department. Compliance with other applicable requirements may require changes to the approved use and/or plans. These changes shall be processed in accordance with the procedures contained in Condition #4.

4. **Minor and Major Changes**

- a. Minor changes to the approved project, plans, Conditions, facilities, or use may be approved administratively by the Director of City Planning.
- b. Major changes to the approved project, plans, Conditions, facilities, or use shall be reviewed by the Director of City Planning to determine whether such changes require submittal and approval of a revision to the Approval by the original approving body or a new independent permit/approval. Major revisions shall be reviewed in accordance with the procedures required for the original permit/approval. A new independent permit/approval shall be reviewed in accordance with the procedures required for the new permit/approval.

5. **Compliance with Conditions of Approval**

- a. The project applicant and property owner, including successors, (collectively referred to hereafter as the “project applicant” or “applicant”) shall be responsible for compliance with all the Conditions of Approval and any recommendations contained in any submitted and approved technical report at his/her sole cost and expense, subject to review and approval by the City of Oakland.

- b. The City of Oakland reserves the right at any time during construction to require certification by a licensed professional at the project applicant's expense that the as-built project conforms to all applicable requirements, including but not limited to, approved maximum heights and minimum setbacks. Failure to construct the project in accordance with the Approval may result in remedial reconstruction, permit revocation, permit modification, stop work, permit suspension, or other corrective action.
- c. Violation of any term, Condition, or project description relating to the Approval is unlawful, prohibited, and a violation of the Oakland Municipal Code. The City of Oakland reserves the right to initiate civil and/or criminal enforcement and/or abatement proceedings, or after notice and public hearing, to revoke the Approval or alter these Conditions if it is found that there is violation of any of the Conditions or the provisions of the Planning Code or Municipal Code, or the project operates as or causes a public nuisance. This provision is not intended to, nor does it, limit in any manner whatsoever the ability of the City to take appropriate enforcement actions. The project applicant shall be responsible for paying fees in accordance with the City's Master Fee Schedule for inspections conducted by the City or a City-designated third-party to investigate alleged violations of the Approval or Conditions.

6. Signed Copy of the Approval/Conditions

A copy of the Approval letter and Conditions shall be signed by the project applicant, attached to each set of permit plans submitted to the appropriate City agency for the project, and made available for review at the project job site at all times.

7. Blight/Nuisances

The project site shall be kept in a blight/nuisance-free condition. Any existing blight or nuisance shall be abated within 60 days of approval, unless an earlier date is specified elsewhere.

8. Indemnification

- a. To the maximum extent permitted by law, the project applicant shall defend (with counsel acceptable to the City), indemnify, and hold harmless the City of Oakland, the Oakland City Council, the Oakland Redevelopment Successor Agency, the Oakland City Planning Commission, and their respective agents, officers, employees, and volunteers (hereafter collectively called "City") from any liability, damages, claim, judgment, loss (direct or indirect), action, causes of action, or proceeding (including legal costs, attorneys' fees, expert witness or consultant fees, City Attorney or staff time, expenses or costs) (collectively called "Action") against the City to attack, set aside, void or annul this Approval or implementation of this Approval. The City may elect, in its sole discretion, to participate in the defense of said Action and the project applicant shall reimburse the City for its reasonable legal costs and attorneys' fees.
- b. Within ten (10) calendar days of the filing of any Action as specified in subsection (a) above, the project applicant shall execute a Joint Defense Letter of Agreement with the City, acceptable to the Office of the City Attorney, which memorializes the above obligations. These obligations and the Joint Defense Letter of Agreement shall survive termination, extinguishment, or invalidation of the Approval. Failure to timely execute the Letter of Agreement does not relieve the project applicant of any of the obligations contained in this Condition or other requirements or Conditions of Approval that may be imposed by the City.

9. Severability

The Approval would not have been granted but for the applicability and validity of each and every one of the specified Conditions, and if one or more of such Conditions is found to be invalid by a court of competent jurisdiction this Approval would not have been granted without requiring other valid Conditions consistent with achieving the same purpose and intent of such Approval.

10. **Special Inspector/Inspections, Independent Technical Review, Project Coordination and Monitoring**

The project applicant may be required to cover the full costs of independent third-party technical review and City monitoring and inspection, including without limitation, special inspector(s)/inspection(s) during times of extensive or specialized plan-check review or construction, and inspections of potential violations of the Conditions of Approval. The project applicant shall establish a deposit with the Bureau of Building, if directed by the Building Official, Director of City Planning, or designee, prior to the issuance of a construction-related permit and on an ongoing as-needed basis.

11. **Public Improvements**

The project applicant shall obtain all necessary permits/approvals, such as encroachment permits, obstruction permits, curb/gutter/sidewalk permits, and public improvement (“p-job”) permits from the City for work in the public right-of-way, including but not limited to, streets, curbs, gutters, sidewalks, utilities, and fire hydrants. Prior to any work in the public right-of-way, the applicant shall submit plans for review and approval by the Bureau of Planning, the Bureau of Building, and other City departments as required. Public improvements shall be designed and installed to the satisfaction of the City.

12. **Regulatory Permits and Authorizations from Other Agencies**

Requirement: The project applicant shall obtain all necessary regulatory permits and authorizations from applicable resource/regulatory agencies including, but not limited to, the Regional Water Quality Control Board, Bay Area Air Quality Management District, Bay Conservation and Development Commission, California Department of Fish and Wildlife, U. S. Fish and Wildlife Service, and Army Corps of Engineers and shall comply with all requirements and conditions of the permits/authorizations. The project applicant shall submit evidence of the approved permits/authorizations to the City, along with evidence demonstrating compliance with any regulatory permit/authorization conditions of approval.

When Required: Prior to activity requiring permit/authorization from regulatory agency

Initial Approval: Approval by applicable regulatory agency with jurisdiction; evidence of approval submitted to Bureau of Planning

Monitoring/Inspection: Applicable regulatory agency with jurisdiction

13. **Graffiti Control**

Requirement:

- a. During construction and operation of the project, the project applicant shall incorporate best management practices reasonably related to the control of graffiti and/or the mitigation of the impacts of graffiti. Such best management practices may include, without limitation:
 - i. Installation and maintenance of landscaping to discourage defacement of and/or protect likely graffiti-attracting surfaces.
 - ii. Installation and maintenance of lighting to protect likely graffiti-attracting surfaces.
 - iii. Use of paint with anti-graffiti coating.

- iv. Incorporation of architectural or design elements or features to discourage graffiti defacement in accordance with the principles of Crime Prevention Through Environmental Design (CPTED).
- v. Other practices approved by the City to deter, protect, or reduce the potential for graffiti defacement.
- b. The project applicant shall remove graffiti by appropriate means within seventy-two (72) hours. Appropriate means include the following:
 - i. Removal through scrubbing, washing, sanding, and/or scraping (or similar method) without damaging the surface and without discharging wash water or cleaning detergents into the City storm drain system.
 - ii. Covering with new paint to match the color of the surrounding surface.
 - iii. Replacing with new surfacing (with City permits if required).

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

14. Construction-Related Air Pollution Controls (Dust and Equipment Emissions)

Requirement: The project applicant shall implement all of the following applicable air pollution control measures during construction of the project:

- a. Water all exposed surfaces of active construction areas at least twice daily. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever feasible.
- b. Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- c. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- d. Pave all roadways, driveways, sidewalks, etc. within one month of site grading or as soon as feasible. In addition, building pads should be laid within one month of grading or as soon as feasible unless seeding or soil binders are used.
- e. Enclose, cover, water twice daily, or apply (non-toxic) soil stabilizers to exposed stockpiles (dirt, sand, etc.).
- f. Limit vehicle speeds on unpaved roads to 15 miles per hour.
- g. Idling times on all diesel-fueled commercial vehicles over 10,000 lbs. shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485, of the California Code of Regulations). Clear signage to this effect shall be provided for construction workers at all access points.
- h. Idling times on all diesel-fueled off-road vehicles over 25 horsepower shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes and fleet operators must develop a written policy as required by Title 23, Section 2449, of the California Code of Regulations (“California Air Resources Board Off-Road Diesel Regulations”).

- i. All construction equipment shall be maintained and properly tuned in accordance with the manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- j. Portable equipment shall be powered by electricity if available. If electricity is not available, propane or natural gas shall be used if feasible. Diesel engines shall only be used if electricity is not available and it is not feasible to use propane or natural gas.

15. Archaeological and Paleontological Resources – Discovery During Construction

Requirement: Pursuant to CEQA Guidelines section 15064.5(f), in the event that any historic or prehistoric subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant shall notify the City and consult with a qualified archaeologist or paleontologist, as applicable, to assess the significance of the find. In the case of discovery of paleontological resources, the assessment shall be done in accordance with the Society of Vertebrate Paleontology standards. If any find is determined to be significant, appropriate avoidance measures recommended by the consultant and approved by the City must be followed unless avoidance is determined unnecessary or infeasible by the City. Feasibility of avoidance shall be determined with consideration of factors such as the nature of the find, project design, costs, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery, excavation) shall be instituted. Work may proceed on other parts of the project site while measures for the cultural resources are implemented.

In the event of data recovery of archaeological resources, the project applicant shall submit an Archaeological Research Design and Treatment Plan (ARDTP) prepared by a qualified archaeologist for review and approval by the City. The ARDTP is required to identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ARDTP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The ARDTP shall include the analysis and specify the curation and storage methods. Data recovery, in general, shall be limited to the portions of the archaeological resource that could be impacted by the proposed project. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practicable. Because the intent of the ARDTP is to save as much of the archaeological resource as possible, including moving the resource, if feasible, preparation and implementation of the ARDTP would reduce the potential adverse impact to less than significant. The project applicant shall implement the ARDTP at his/her expense.

In the event of excavation of paleontological resources, the project applicant shall submit an excavation plan prepared by a qualified paleontologist to the City for review and approval. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by a qualified paleontologist, as appropriate, according to current professional standards and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

16. Human Remains – Discovery During Construction

Requirement: Pursuant to CEQA Guidelines section 15064.5(e)(1), in the event that human skeletal remains are uncovered at the project site during construction activities, all work shall immediately halt and the project applicant shall notify the City and the Alameda County Coroner. If the County Coroner determines that an investigation of the cause of death is required or that the remains are

Native American, all work shall cease within 50 feet of the remains until appropriate arrangements are made. In the event that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of section 7050.5 of the California Health and Safety Code. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance, and avoidance measures (if applicable) shall be completed expeditiously and at the expense of the project applicant.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

17. Construction-Related Permit(s)

Requirement: The project applicant shall obtain all required construction-related permits/approvals from the City. The project shall comply with all standards, requirements and conditions contained in construction-related codes, including but not limited to the Oakland Building Code and the Oakland Grading Regulations, to ensure structural integrity and safe construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

18. Hazardous Materials Related to Construction

Requirement: The project applicant shall ensure that Best Management Practices (BMPs) are implemented by the contractor during construction to minimize potential negative effects on groundwater, soils, and human health. These shall include, at a minimum, the following:

- a. Follow manufacture's recommendations for use, storage, and disposal of chemical products used in construction;
- b. Avoid overtopping construction equipment fuel gas tanks;
- c. During routine maintenance of construction equipment, properly contain and remove grease and oils;
- d. Properly dispose of discarded containers of fuels and other chemicals;
- e. Implement lead-safe work practices and comply with all local, regional, state, and federal requirements concerning lead (for more information refer to the Alameda County Lead Poisoning Prevention Program); and
- f. If soil, groundwater, or other environmental medium with suspected contamination is encountered unexpectedly during construction activities (e.g., identified by odor or visual staining, or if any underground storage tanks, abandoned drums or other hazardous materials or wastes are encountered), the project applicant shall cease work in the vicinity of the suspect material, the area shall be secured as necessary, and the applicant shall take all appropriate measures to protect human health and the environment. Appropriate measures shall include notifying the City and applicable regulatory agency(ies) and implementation of the actions described in the City's Standard Conditions of Approval, as necessary, to identify the nature and extent of contamination. Work shall not resume in the area(s) affected until the measures have been implemented under the oversight of the City or regulatory agency, as appropriate.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

19. Construction Days/Hours

Requirement: The project applicant shall comply with the following restrictions concerning construction days and hours:

- a. Construction activities are limited to between 7:00 a.m. and 7:00 p.m. Monday through Friday, except that pier drilling and/or other extreme noise generating activities greater than 90 dBA shall be limited to between 8:00 a.m. and 4:00 p.m.
- b. Construction activities are limited to between 9:00 a.m. and 5:00 p.m. on Saturday. In residential zones and within 300 feet of a residential zone, construction activities are allowed from 9:00 a.m. to 5:00 p.m. only within the interior of the building with the doors and windows closed. No pier drilling or other extreme noise generating activities greater than 90 dBA are allowed on Saturday.
- c. No construction is allowed on Sunday or federal holidays.

Construction activities include, but are not limited to, truck idling, moving equipment (including trucks, elevators, etc.) or materials, deliveries, and construction meetings held on-site in a non-enclosed area.

Any construction activity proposed outside of the above days and hours for special activities (such as concrete pouring which may require more continuous amounts of time) shall be evaluated on a case-by-case basis by the City, with criteria including the urgency/emergency nature of the work, the proximity of residential or other sensitive uses, and a consideration of nearby residents'/occupants' preferences. The project applicant shall notify property owners and occupants located within 300 feet at least 14 calendar days prior to construction activity proposed outside of the above days/hours. When submitting a request to the City to allow construction activity outside of the above days/hours, the project applicant shall submit information concerning the type and duration of proposed construction activity and the draft public notice for City review and approval prior to distribution of the public notice.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

20. Construction Noise

Requirement: The project applicant shall implement noise reduction measures to reduce noise impacts due to construction. Noise reduction measures include, but are not limited to, the following:

- a. Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures and acoustically-attenuating shields or shrouds) wherever feasible.
- b. Except as provided herein, impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electrically powered to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used, if such jackets are commercially available, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever such procedures are available and consistent with construction procedures.

- c. Applicant shall use temporary power poles instead of generators where feasible.
- d. Stationary noise sources shall be located as far from adjacent properties as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or use other measures as determined by the City to provide equivalent noise reduction.
- e. The noisiest phases of construction shall be limited to less than 10 days at a time. Exceptions may be allowed if the City determines an extension is necessary and all available noise reduction controls are implemented.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

21. Extreme Construction Noise

a. Construction Noise Management Plan Required

Requirement: Prior to any extreme noise generating construction activities (e.g., pier drilling, pile driving and other activities generating greater than 90dBA), the project applicant shall submit a Construction Noise Management Plan prepared by a qualified acoustical consultant for City review and approval that contains a set of site-specific noise attenuation measures to further reduce construction impacts associated with extreme noise generating activities. The project applicant shall implement the approved Plan during construction. Potential attenuation measures include, but are not limited to, the following:

- i. Erect temporary plywood noise barriers around the construction site, particularly along on sites adjacent to residential buildings;
- ii. Implement “quiet” pile driving technology (such as pre-drilling of piles, the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
- iii. Utilize noise control blankets on the building structure as the building is erected to reduce noise emission from the site;
- iv. Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings by the use of sound blankets for example and implement such measure if such measures are feasible and would noticeably reduce noise impacts; and
- v. Monitor the effectiveness of noise attenuation measures by taking noise measurements.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

b. Public Notification Required

Requirement: The project applicant shall notify property owners and occupants located within 300 feet of the construction activities at least 14 calendar days prior to commencing extreme noise generating activities. Prior to providing the notice, the project applicant shall submit to the City for review and approval the proposed type and duration of extreme noise generating activities and the proposed public notice. The public notice shall provide the estimated start and end dates of the extreme noise generating activities and describe noise attenuation measures to be implemented.

When Required: During construction

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

22. Operational Noise

Requirement: Noise levels from the project site after completion of the project (i.e., during project operation) shall comply with the performance standards of chapter 17.120 of the Oakland Planning Code and chapter 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the City.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

23. Construction Activity in the Public Right-of-Way

a. *Obstruction Permit Required*

Requirement: The project applicant shall obtain an obstruction permit from the City prior to placing any temporary construction-related obstruction in the public right-of-way, including City streets and sidewalks.

When Required: Prior to approval of construction-related permit

Initial Approval: Bureau of Building

Monitoring/Inspection: Bureau of Building

b. *Traffic Control Plan Required*

Requirement: In the event of obstructions to vehicle or bicycle travel lanes, the project applicant shall submit a Traffic Control Plan to the City for review and approval prior to obtaining an obstruction permit. The project applicant shall submit evidence of City approval of the Traffic Control Plan with the application for an obstruction permit. The Traffic Control Plan shall contain a set of comprehensive traffic control measures for auto, transit, bicycle, and pedestrian detours, including detour signs if required, lane closure procedures, signs, cones for drivers, and designated construction access routes. The project applicant shall implement the approved Plan during construction.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Transportation Services Division

Monitoring/Inspection: Bureau of Building

c. *Repair of City Streets*

Requirement: The project applicant shall repair any damage to the public right-of way, including streets and sidewalks caused by project construction at his/her expense within one week of the occurrence of the damage (or excessive wear), unless further damage/excessive wear may continue; in such case, repair shall occur prior to approval of the final inspection of the construction-related permit. All damage that is a threat to public health or safety shall be repaired immediately.

When Required: Prior to building permit final

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

24. Construction and Demolition Waste Reduction and Recycling

Requirement: The project applicant shall comply with the City of Oakland Construction and Demolition Waste Reduction and Recycling Ordinance (chapter 15.34 of the Oakland Municipal Code) by submitting a Construction and Demolition Waste Reduction and Recycling Plan (WRRP) for City review and approval, and shall implement the approved WRRP. Projects subject to these

requirements include all new construction, renovations/alterations/modifications with construction values of \$50,000 or more (except R-3 type construction), and all demolition (including soft demolition) except demolition of type R-3 construction. The WRRP must specify the methods by which the project will divert construction and demolition debris waste from landfill disposal in accordance with current City requirements. The WRRP may be submitted electronically at www.greenhalosystems.com or manually at the City's Green Building Resource Center. Current standards, FAQs, and forms are available on the City's website and in the Green Building Resource Center.

When Required: Prior to approval of construction-related permit

Initial Approval: Public Works Department, Environmental Services Division

Monitoring/Inspection: Public Works Department, Environmental Services Division

25. Underground Utilities

Requirement: The project applicant shall place underground all new utilities serving the project and under the control of the project applicant and the City, including all new gas, electric, cable, and telephone facilities, fire alarm conduits, street light wiring, and other wiring, conduits, and similar facilities. The new facilities shall be placed underground along the project's street frontage and from the project structures to the point of service. Utilities under the control of other agencies, such as PG&E, shall be placed underground if feasible. All utilities shall be installed in accordance with standard specifications of the serving utilities.

When Required: During construction

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

PROJECT-SPECIFIC CONDITIONS

26. Public Works Review

Requirement: The plans shall receive a satisfactory review from the Public Works Agency, incorporating any required modifications.

When Required: Prior to submitting a building permit application

Initial Approval: N/A

Monitoring/Inspection: N/A

27. Emissions Report

Requirement: A RF emissions report shall be submitted to the Planning Bureau indicating that the site is actually operating within the acceptable thresholds as established by the Federal government or any such agency who may be subsequently authorized to establish such standards.

Requirement: Prior to a final inspection

When Required: Prior to submitting a building permit application

Initial Approval: N/A

Monitoring/Inspection: N/A

28. Camouflage

Requirement: The antenna shall be painted, texturized, and maintained matte silver, and the equipment and any other accessory items including cables matte brown, to better camouflage the facility to the utility pole.

When Required: Prior to a final inspection

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

29. Operational

Requirement: Noise levels from the activity, property, or any mechanical equipment on site shall comply with the performance standards of Section 17.120 of the Oakland Planning Code and Section 8.18 of the Oakland Municipal Code. If noise levels exceed these standards, the activity causing the noise shall be abated until appropriate noise reduction measures have been installed and compliance verified by the Planning and Zoning Division and Building Services.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: Bureau of Building

30. Possible District Undergrounding PG&E Pole

Requirement: Should the PG &E utility pole be permanently removed for purposes of district undergrounding or otherwise, the telecommunications facility can only be re-established by applying for and receiving approval of a new application to the Oakland Planning Bureau as required by the regulations.

When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: N/A

31. Collocation

Requirement: Applicant and owner shall allow other future wireless communications companies including public and quasi-public agencies using similar technology to collocate antenna equipment and facilities on the monopole unless specific technical or other constraints, subject to independent verification, at the applicant's expense, at the discretion of the City of Oakland Zoning Manager, prohibit said collocation. Applicant and other wireless carriers shall provide a mechanism for the construction and maintenance of shared facilities and infrastructure and shall provide for equitable sharing of cost in accordance with industry standards. Construction of future facilities shall not interrupt or interfere with the continuous operation of applicant's facilities.

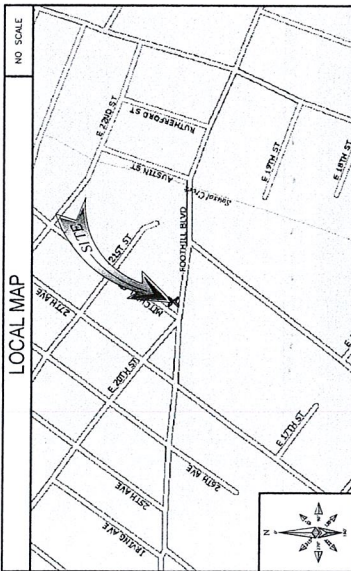
When Required: Ongoing

Initial Approval: N/A

Monitoring/Inspection: N/A

NW-CA-SANFRNMC 06047A

ADJACENT TO (IN PROW)
2750 FOOTHILL BLVD
OAKLAND, CA 94601



SHEET INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
DN-1	GENERAL NOTES AND LEGEND
C-1	OVERALL SITE PLAN
C-2	UTILITY POLE ELEVATIONS AND RISER DETAILS
C-3	EQUIPMENT DETAILS
C-4	EQUIPMENT DETAILS

* PLOT, DRAWINGS WILL BE HALF SCALE

ALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DISCREPANCIES OCCURRING BETWEEN THE DRAWINGS AND THE FIELD CONDITIONS.



PROJECT INFORMATION

OWNER: EXTINET SYSTEMS CA, LLC ADDRESS: 2000 CROW CANYON PL., SUITE 210, SAN RAMON, CA 94583 PHONE: - E-MAIL: -	APPLICANT: COMPANY: EXTINET SYSTEMS (CALIFORNIA), LLC CONTACT: MATTHEW YERODUGH ADDRESS: 2000 CROW CANYON PL., SUITE 210, SAN RAMON, CA 94583 PHONE: (415) 598-3474 E-MAIL: MYERODUGH@EXTINETSYSTEMS.COM
AGENT: COMPANY: BLACK & VEATCH ENGINEER: ANA GOMEZ PHONE: (913) 458-9148 ADDRESS: 2995 OAK ROAD, WALNUT CREEK, CA 94597 E-MAIL: GOMEZ@BLACK&VEATCH.COM	ENGINEER: COMPANY: BLACK & VEATCH ENGINEER: ARON EVANS PHONE: (952) 898-0751 E-MAIL: EWARDS@BVB.COM
POLE OWNER: COMPANY: EXTINET SYSTEMS CA, LLC ADDRESS: 2000 CROW CANYON PL., SUITE 210, SAN RAMON, CA 94583 PHONE: - E-MAIL: -	PROJECT DATA: LATITUDE: 37.784587 LONGITUDE: -122.226603 POLE #: W3316 ELEVATION: NA ZONING JURISDICTION: CITY OF OAKLAND ZONING DISTRICT: RU-5 NEAREST A.P.N.: 26-740-32-1 OCCUPANCY: U, UNMANNED CONSTRUCTION TYPE: WOOD LIGHT POLE TITLE 24 REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. THIS PROJECT IS EXEMPT.

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE FOLLOWING CODES:

- 2013 CALIFORNIA BUILDING STANDARDS CODE - 2013
- 2013 CALIFORNIA ELECTRICAL CODE
- 2013 CALIFORNIA MECHANICAL CODE
- 2013 CALIFORNIA PLUMBING CODE
- 2013 CALIFORNIA FIRE CODE
- 2013 CALIFORNIA INTERNATIONAL FIRE CODE
- CITY AND/OR COUNTY ORDINANCES
- 2012 INTERNATIONAL FIRE CODE
- 2012 INTERNATIONAL PLUMBING CODE
- EFFECTIVE UNTIL JANUARY 1ST, 2017

PROJECT DESCRIPTION

THESE DRAWINGS DEPICT THE INSTALLATION OF A WIRELESS TELECOMMUNICATIONS NODE IN THE PUBLIC RIGHT OF WAY DESCRIBED HEREIN.

GENERAL PROJECT NOTES

- PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF/HERSELF WITH THE SCOPE OF WORK AND ALL CONDITIONS AFFECTING THE NEW PROJECT.
- CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND AS INDICATED ON THESE CONSTRUCTION DOCUMENTS CAN BE ACCOMPLISHED AS SHOWN PRIOR TO COMMENCEMENT OF ANY WORK.
- ALL FIELD INSPECTIONS BEFORE BEGINNING OF ANY WORK SHALL BE APPROVED IN WRITING BY AN EXTINET SYSTEMS REPRESENTATIVE.
- INSTALL ALL EQUIPMENT AND MATERIALS PER THE MANUFACTURER'S RECOMMENDATIONS, UNLESS INDICATED OTHERWISE.
- EXTINET SYSTEMS, IN WRITING, OF ANY MAJOR DISCREPANCIES REGARDING THE CONTRACTOR'S EXISTING CONDITIONS, AND DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS FROM AN EXTINET SYSTEMS REPRESENTATIVE, AND ADJUSTING THE BID ACCORDINGLY.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF THE WORK UNDER THE CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE COVERAGE PRIOR TO COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE COVERAGE PRIOR TO COMMENCEMENT OF WORK.
- CONTRACTOR PLANS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE PROJECT. THE CONTRACTOR SHALL PROVIDE EXTINET SYSTEMS WITH ONE COPY OF ALL RED-LINED DRAWINGS.
- VERIFY ALL FINAL EQUIPMENT WITH AN EXTINET SYSTEMS REPRESENTATIVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND INSURANCE COVERAGE PRIOR TO COMMENCEMENT OF WORK.

UNDERGROUND SERVICE ALERT

UTILITIES PROTECTION CENTER, INC.
811
48 HOURS BEFORE YOU DIG

INTERNAL REVIEW

CONSTRUCTION SIGNATURE _____ DATE _____

RF SIGNATURE _____ DATE _____

CLEAR ESTATE SIGNATURE _____ DATE _____

BLACK & VEATCH CORPORATION
2995 OAK ROAD
SUITE 480
WALNUT CREEK, CA 94597

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PROJECT NO	DRAWN BY	CHECKED BY
192417.4181	MBS	GAC

REV	DATE	DESCRIPTION
B	09/27/16	ISSUED FOR REVIEW
A	09/27/16	ISSUED FOR REVIEW

EXTINET SYSTEMS (CA) LLC
2000 CROW CANYON PLACE
SUITE 210
SAN RAMON, CA 94583

SITE ADDRESS
ADJACENT TO (IN PROW)
2750 FOOTHILL BLVD
OAKLAND, CA 94601

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

PRELIMINARY

INTERNAL REVIEW	DATE
CONSTRUCTION SIGNATURE	DATE
RF SIGNATURE	DATE
REAL ESTATE SIGNATURE	DATE

BLACK & VEATCH
BLACK & VEATCH CORPORATION
3939 OAK ROAD
WALNUT CREEK, CA 94597

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PROJECT NO. DRAWN BY CHECKED BY
1924714181 MBS GAC

REV	DATE	DESCRIPTION
B	09/27/18	ISSUED FOR REVIEW
A	09/27/18	ISSUED FOR REVIEW

PRELIMINARY

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EXTENET SYSTEMS (CA) LLC
2000 CROW CANYON PLACE
SUITE 210
SAN RAMON, CA 94583

SITE ADDRESS
ADJACENT TO (IN ROW)
2750 FOOTHILL BLVD
OAKLAND, CA 94601

SHEET TITLE
GENERAL NOTES
AND LEGEND

SHEET NUMBER
GN-1

- LEGEND**
- EXOTHERMIC CONNECTION
 - MECHANICAL CONNECTION
 - TEST CHEMICAL ELECTROLYTIC GROUNDING SYSTEM
 - EXOTHERMIC WITH INSPECTION SLEEVE
 - GROUNDING BAR
 - GROUND ROD
 - CHAINLINK FENCE
 - WOOD/WROUGHT IRON FENCE
 - WALL STRUCTURE
 - LEASE AREA
 - SETBACKS
 - WATER LINE
 - UNDERGROUND POWER
 - UNDERGROUND TELCO
 - UNDERGROUND FIBER
 - OVERHEAD POWER
 - OVERHEAD TELCO
 - UNDERGROUND TELCO/POWER
 - ABOVE GROUND POWER
 - ABOVE GROUND TELCO
 - ABOVE GROUND TELCO/POWER



SECTION REFERENCE

DETAIL REFERENCE

- TORQUE REQUIREMENTS**
- ALL RF CONNECTIONS SHALL BE TIGHTENED BY A TORQUE WRENCH.
 - ALL RF CONNECTIONS, GROUNDING HARDWARE AND ANTENNA HARDWARE SHALL HAVE A TORQUE MARK INSTALLED IN A CONTINUOUS STRAIGHT LINE FROM BOTH SIDES OF THE CONNECTION.
 - RF CONNECTION BOTH SIDES OF THE CONNECTOR.
 - RF CONNECTIONS SHALL BE TIGHTENED TO 9 LB-FT (1.2 NM).
 - ALL 8M ANTENNA HARDWARE SHALL BE TIGHTENED TO 9 LB-FT (1.2 NM).
 - ALL 12M ANTENNA HARDWARE SHALL BE TIGHTENED TO 18-22 LB-FT (2.44 - 2.93 NM).
 - ALL DIN TYPE CONNECTIONS SHALL BE TIGHTENED TO 15-20 LB-IN (1.7 - 2.3 NM).

- ROW UTILITY POLE CONSTRUCTION NOTES**
- NO BOLT THREADS TO PROTRUDE MORE THAN 1-1/2" (3.81M).
 - FILL ALL HOLES LEFT IN POLE FROM REARRANGEMENT OF CLIMBERS.
 - ALL CLIMB STEPS NEXT TO CONDUIT SHALL HAVE EXTENDED STEPS.
 - CABLE NOT TO IMPROVE 15" (3.81M) CLEAR SPACE OFF POLE FACE (12.00M).
 - 90 SHORT SWEEPS UNDER ANTENNA ARM. ALL CABLES MUST ONLY TRANSITION ON THE INSIDE OR BOTTOM OF ARMS (NO CABLE ON TOP OF ARMS).
 - USE 90 CONNECTOR AT CABLE CONNECTION TO ANTENNAS.
 - USE 1/2" (1.27M) CABLE ON ANTENNAS UNLESS OTHERWISE SPECIFIED.
 - FILL VOID AROUND CABLES AT CONDUIT OPENING WITH FOAM SEALANT TO PREVENT WATER INTRUSION.

NODE SITE POWER SHUT-DOWN PROCEDURES

- FOR NON EMERGENCY/SCHEDULED POWER SHUT DOWN
 - CALL EXTENET SYSTEMS NOC (NETWORK OPERATIONS CENTER) (866)892-5327
 - 24 HOURS PRIOR TO SCHEDULED POWER SHUT OFF
- PROVIDE THE FOLLOWING INFORMATION TO THE NOC
 - YOUR NAME AND REASON FOR POWER SHUTOFF
 - PROVIDE DURATION OF OUTAGE
- UNLOCK DISCONNECT BOX, FLIP BOTH BREAKERS TO THE OFF POSITION
- POWER SHUT OFF VERIFICATION WITH APPROVED P&E PROCEDURES
- NOTIFY EXTENET NOC UPON COMPLETION OF WORK
- REINSTALL LOCK ON DISCONNECT BOX
- EMERGENCY POWER SHUT OFF
 - CALL EXTENET SYSTEMS NOC (NETWORK OPERATIONS CENTER) (866)892-5327
 - PROVIDE THE FOLLOWING INFORMATION
 - NOC SITE NUMBER IDENTIFIED ON SITE NUMBERING STICKER
 - YOUR NAME AND REASON FOR POWER SHUTOFF
 - PROVIDE DURATION OF OUTAGE
 - UNLOCK DISCONNECT BOX, FLIP BOTH BREAKERS TO THE OFF POSITION
 - POWER SHUT OFF VERIFICATION WITH APPROVED P&E PROCEDURES
 - REINSTALL LOCK ON DISCONNECT BOX

- GENERAL NOTES**
- THESE NOTES SHALL BE CONSIDERED A PART OF THE WRITTEN SPECIFICATIONS, CONTRACT AND CONSTRUCTION DOCUMENTS.
 - THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THESE PLANS AND IN THE CONTRACT DOCUMENTS.
 - PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTOR SHALL VISIT THE JOB SITES AND BE RESPONSIBLE FOR ACCOMPLISHING ALL NECESSARY PRE-CONSTRUCTION WORK. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE MECHANICAL ENGINEER AND ARCHITECT/ENGINEER PRIOR TO BID SUBMITTAL.
 - ALL WORK, PERFORMED AND MATERIALS, INCLUDING APPLICABLE MUNICIPAL AND UTILITY COMPANY CODES, REGULATIONS, AND ORDINANCES, SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE RECOMMENDATIONS. IF THESE RECOMMENDATIONS ARE IN CONFLICT WITH THE CONTRACT AND CONSTRUCTION DOCUMENTS AND/OR APPLICABLE CODES OR REGULATIONS, REVIEW AND RESOLVE THE CONFLICT WITH DIRECTION FROM THE MECHANICAL ENGINEER AND ARCHITECT/ENGINEER PRIOR TO COMMENCING WORK.
 - THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION, MEASUREMENTS, TECHNOLOGIES, SEQUENCES, AND PROCEDURES AND FOR COORDINATION OF ALL PORTIONS OF THE WORK UNDER THE AUTHORITY OF THE MECHANICAL ENGINEER AND ARCHITECT/ENGINEER AND WITH THE AUTHORIZED REPRESENTATIVE OF ANY OUTSIDE PUBLIC OR PROPRIETARY OWNER.
 - THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO PAVING, CURB, VEGETATION, CALVANIZED SURFACE OR OTHER EXISTING ELEMENTS AND UPON COMPLETION OF THE WORK, RETURN ANY DAMAGES THAT OCCURRED DURING CONSTRUCTION TO THE SATISFACTION OF EXTENET.
 - CONTRACTOR IS TO KEEP THE GENERAL AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, AND CLEAN CONDITION DAILY EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. LEAVE PREMISES IN THE SAME OR BETTER CONDITION AS RECEIVED.
 - PLANS ARE INTENDED TO BE DIAGNOSTIC ONLY AND SHOULD NOT BE SCALED UNLESS OTHERWISE NOTED. THE DISTANCE AND LOCATION OF UTILITIES AND OTHER AGENCY'S FACILITIES WERE OBTAINED BY A SEARCH OF CONSTRUCTION AND USE EXISTING CARE AND PROTECTIVE MEASURES TO PREVENT DAMAGE TO THESE FACILITIES. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND FACILITIES WITHIN THE LIMITS OF THE WORK, WHETHER THEY ARE IDENTIFIED IN THE CONTRACT DOCUMENTS OR OTHERWISE.
 - THE CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICE ALERT (800) 227-2600, AT LEAST TWO WORKING DAYS PRIOR TO THE START OF ANY EXCAVATION.

DEFINITIONS

- "TYPICAL" OR "TYP" MEANS THAT THIS ITEM IS SUBSTANTIALLY THE SAME AS THAT SHOWN IN THE "TYPICAL" SECTION OF THE DRAWINGS, UNLESS OTHERWISE SPECIFIED.
- "AS REQUIRED" MEANS AS REQUIRED BY REGULATORY REQUIREMENTS, BY REFERENCED STANDARDS, BY EXISTING CONDITIONS, BY GENERALLY ACCEPTED CONSTRUCTION PRACTICE OR BY THE CONTRACT DOCUMENTS.
- "AS SHOWN" MEANS AS SHOWN ON THE DRAWINGS, UNLESS OTHERWISE SPECIFIED.
- "AS BUILT" MEANS ACCURATELY LOCATE FINISH FACES OF MATERIALS IN THE SAME PLACE.
- THE TERM "VERIFY" OR "Y.V." SHALL BE UNDERSTOOD TO MEAN VERIFY IN FIELD WITH ENGINEER AND REQUIRE THAT THE CONTRACTOR CONFIRM INTERVIEW REGARDING NOTED CONDITION AND PROCEED ONLY AFTER RECEIVING DIRECTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS PRIOR TO COMMENCING WORK OR INSTALLATION OF SUCH PROPOSED EQUIPMENT.
- FURNISH AND INSTALL, SUPPLY ONLY, OTHERS TO INSTALL. INSTALL: INSTALL ITEMS FURNISHED BY OTHERS PROVIDE FURNISH AND INSTALL.

FIELD WELDING NOTES:

- WELDING TO BE PERFORMED BY AWS CERTIFIED WELDER FOR THE TYPE OF AND POSITION INDICATED. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF AWS D1.1.
- GROUND SURFACES TO BE WELDED SHALL BE CLEANED AND PREPARED PRIOR TO WELDING TO REMOVE ALL GALVANIZING WHICH MAY OTHERWISE BE CONSUMED IN THE WELD METAL. APPLY ANTI-SPATTER COMPOUND AFTER GRINDING.
- WELDING TECHNIQUE MUST MINIMIZE TEMPERATURE RISE ON THE INSIDE SURFACE OF THE POLE AND ALSO MINIMIZE SPATTER. USE LARGEST DIAMETER ELECTRODE COMPATIBLE WITH WELDING POSITION AND MATERIAL THICKNESS. ELECTRODES FROM MANUFACTURER'S PACKAGING MUST BE USED FOR IMMEDIATE USE. ELECTRODES MUST BE REMOVED FROM MANUFACTURER'S PACKAGING UNTIL READY FOR IMMEDIATE USE. ELECTRODES MUST BE STORED IN A DRY PLACE TO PREVENT RUST. SAFETY IN WELDING AND CUTTING FOR PROPER PRECAUTIONS.
- UPON COMPLETION OF WELDING, APPLY GALV-A-STICK ZINC COATING TO ALL UNPROTECTED SURFACES. APPLY NECESSARY, APPLY A FINAL COAT OF COMPATIBLE PAINT TO MATCH SURROUNDING SURFACES.

ANTENNA MOUNTING

- DESIGN AND CONSTRUCTION OF ANTENNA SUPPORTS SHALL CONFORM TO CURRENT ANSI/IN-222 OR APPLICABLE LOCAL CODES.
- ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 (ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE), UNLESS NOTED OTHERWISE.
- DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.
- ALL ANTENNA MOUNTS SHALL BE INSTALLED WITH LOCK NUTS, DOUBLE NUTS AND SHALL BE TORQUED TO MANUFACTURER'S RECOMMENDATIONS.
- CONTRACTOR SHALL INSTALL ANTENNA PER MANUFACTURER'S RECOMMENDATION FOR INSTALLATION AND GROUNDING.
- CONTRACTOR SHALL VERIFY ANTENNA MOUNTING AND HARDWARE. ANTENNA MOUNTING SHALL CHECK ANTENNA MOUNT FOR THICKNESS AND EQUIPMENT MOUNTING HOLE SIZE. ANTENNA DOWNWITLS SHALL BE WITHIN 1/2" - 0.5" AS DEFINED BY THE RFDS. ANTENNA DOWNWITLS SHALL BE WITHIN 1/2" - 0.5" AS DEFINED BY THE RFDS.

GENERAL NOTES AND LEGENDS



INTERNAL REVIEW	DATE
CONSTRUCTION SIGNATURE	DATE
RF SIGNATURE	DATE
REAL ESTATE SIGNATURE	DATE

BLACK & VEATCH
 BLACK & VEATCH CORPORATION
 2950 S. WILSON AVENUE
 SUITE 400
 WALNUT CREEK, CA 94597

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PROJECT NO.	192417-1181	CHECKED BY	GAC
DRAWN BY	MBS	DATE	
ISSUED FOR REVIEW	09/27/16	ISSUED FOR REVIEW	09/27/16
REV	DATE	DESCRIPTION	

PRELIMINARY

IF A WORKMAN ON ANY DAY REMOVES OR ALTERS ANY PART OF THE WORK SHOWN ON THESE DRAWINGS, HE SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY SUCH WORK TO ALTER THIS DOCUMENT.

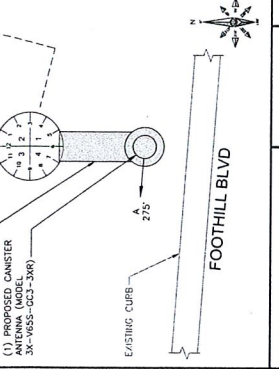
EXTENET SYSTEMS (CA) LLC
 2000 CROW CANYON PLACE
 SUITE 210
 SAN RAMON, CA 94583

SITE ADDRESS
 ADJACENT TO (IN PROX)
 2750 FOOTHILL BLVD
 OAKLAND, CA 94601

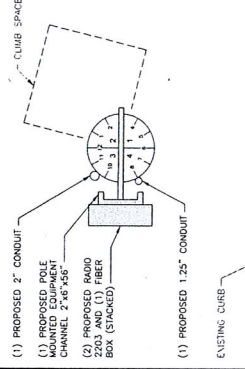
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 UTILITY POLE ELEVATIONS
 AND RISER DETAILS

SHEET NUMBER
C-2

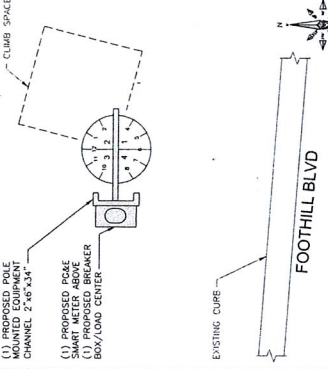
NOTE
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ANTENNA SPACE PLAN VIEW
 NO SCALE

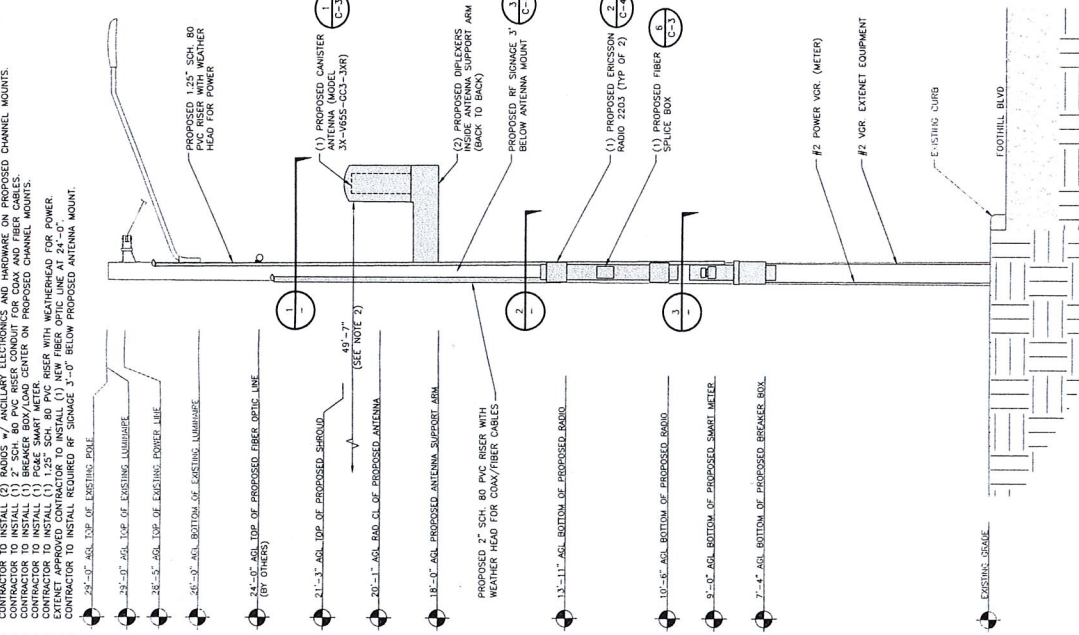


RADIO SPACE PLAN VIEW
 NO SCALE



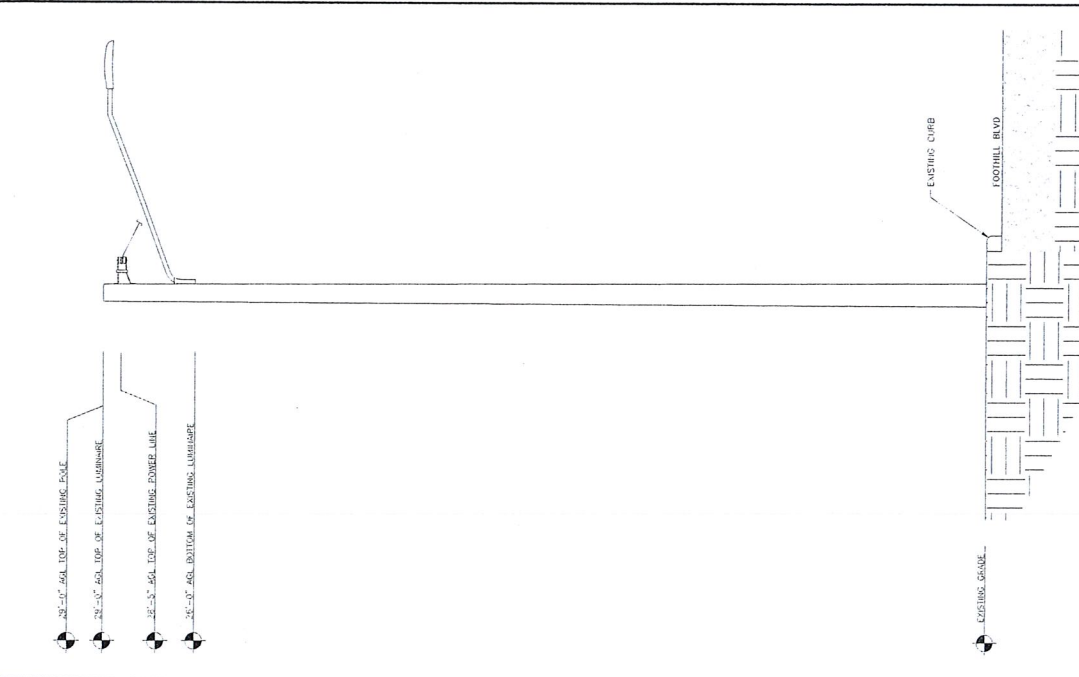
EQUIPMENT PLAN VIEW
 NO SCALE

- NOTES**
1. ALL PROPOSED EQUIPMENT TO BE PAINTED TO MATCH EXISTING CONDITIONS.
 2. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SPACING TO MATCH EXISTING UTILITY POLES AND RISERS.
 3. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SPACING TO MATCH EXISTING UTILITY POLES AND RISERS.
 4. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SPACING TO MATCH EXISTING UTILITY POLES AND RISERS.
 5. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SPACING TO MATCH EXISTING UTILITY POLES AND RISERS.
 6. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SPACING TO MATCH EXISTING UTILITY POLES AND RISERS.
 7. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SPACING TO MATCH EXISTING UTILITY POLES AND RISERS.
 8. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SPACING TO MATCH EXISTING UTILITY POLES AND RISERS.



PROPOSED WEST ELEVATION
 1/2"=1'-0"

- NOTES**
1. CONTRACTOR TO INSTALL ANTENNA W/ ANGLIARY ELECTRONICS AND HARDWARE ON PROPOSED ANTENNA SUPPORT ARM.
 2. CONTRACTOR TO INSTALL (1) 2" SCH. 40 PIV RISER CONDUIT ON PROPOSED CHANNEL MOUNTS.
 3. CONTRACTOR TO INSTALL (1) BREAKER BOX/LOAD CENTER ON PROPOSED CHANNEL MOUNTS.
 4. CONTRACTOR TO INSTALL (1) PIV SMART METER RISER WITH WEATHERHEAD FOR POWER.
 5. CONTRACTOR TO INSTALL (1) PIV SMART METER RISER WITH WEATHERHEAD FOR POWER.
 6. CONTRACTOR TO INSTALL (1) NEW FIBER OPTIC LINE AT 2'-0" BELOW PROPOSED ANTENNA MOUNT.
 7. CONTRACTOR TO INSTALL (1) NEW FIBER OPTIC LINE AT 2'-0" BELOW PROPOSED ANTENNA MOUNT.
 8. CONTRACTOR TO INSTALL (1) NEW FIBER OPTIC LINE AT 2'-0" BELOW PROPOSED ANTENNA MOUNT.



EXISTING WEST ELEVATION
 1/2"=1'-0"



INTERNAL REVIEW	DATE
CONSTRUCTION SIGNATURE	DATE
RF SIGNATURE	DATE
REAL ESTATE SIGNATURE	DATE

BLACK & VEATCH
 BLACK & VEATCH CORPORATION
 2999 OAK ROAD
 WALNUT CREEK, CA 94597

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PROJECT NO	192417.4181	MBS	GAC
DATE			

REV	DATE	DESCRIPTION
B	09/27/16	ISSUED FOR REVIEW
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PRELIMINARY

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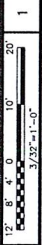
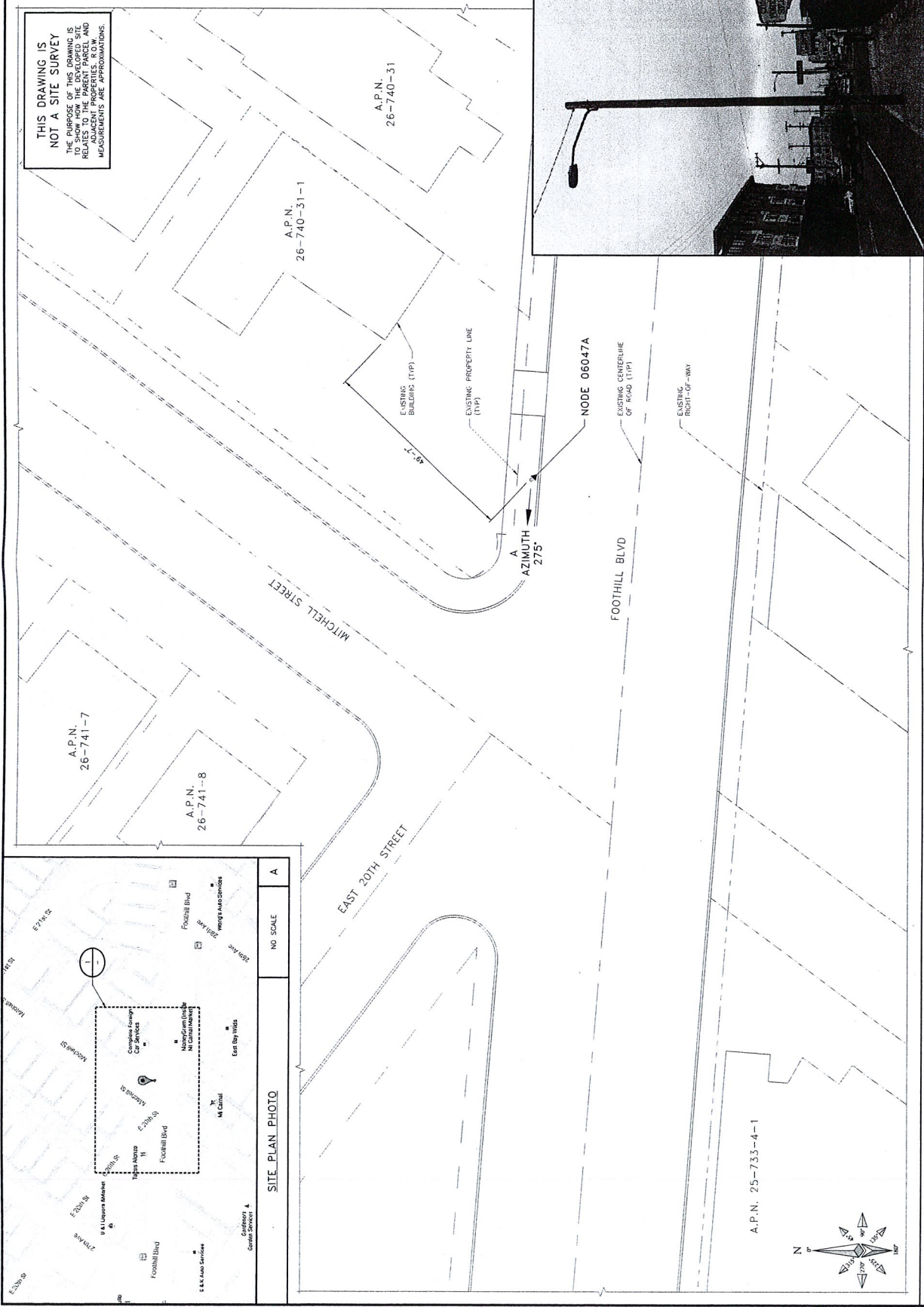
EXTENET SYSTEMS (CA) LLC
 2000 CROW CANYON PLACE
 SUITE 210
 SAN RAMON, CA 94583

SITE ADDRESS
 ADJACENT TO (IN PROW)
 2750 FOOTHILL BLVD
 OAKLAND, CA 94601

SHEET TITLE
 OVERALL SITE PLAN

SHEET NUMBER
C-1

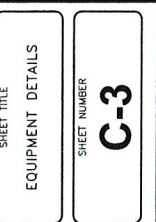
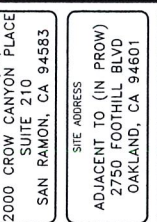
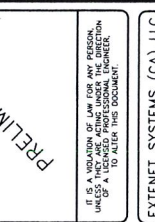
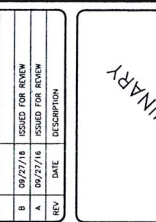
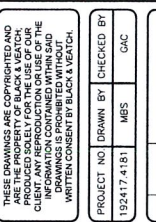
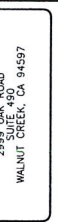
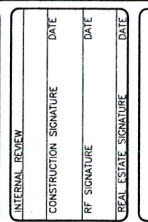
THIS DRAWING IS NOT A SITE SURVEY
 THE PURPOSE OF THIS DRAWING IS TO SHOW HOW THE DEVELOPED SITE RELATES TO THE SURROUNDING ADJACENT PROPERTIES. R.O.C.M. MEASUREMENTS ARE APPROXIMATIONS.



SITE PLAN PHOTO

NO SCALE

OVERALL SITE PLAN

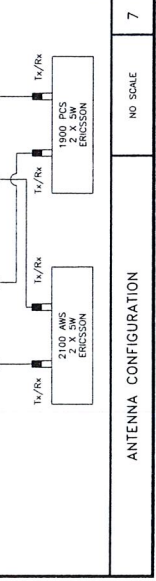
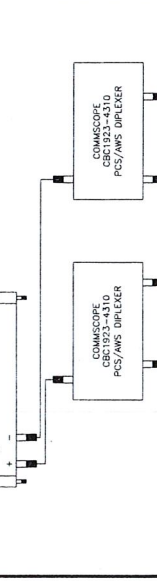
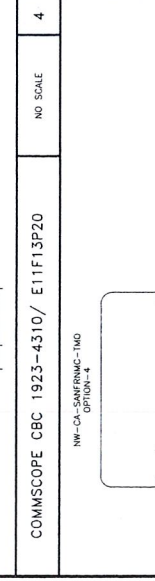
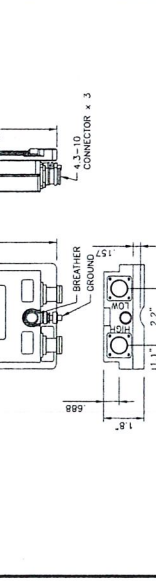
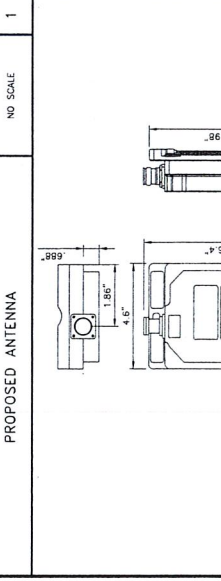
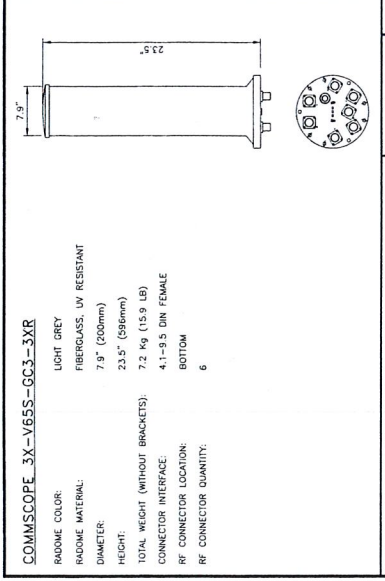
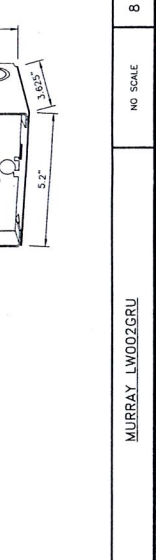
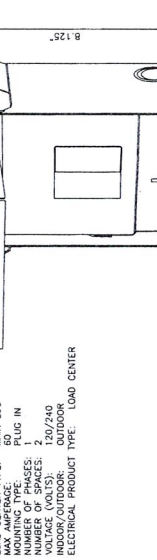
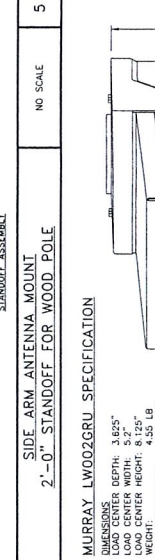
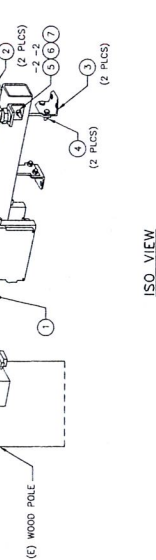
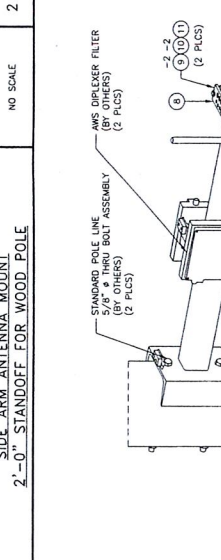
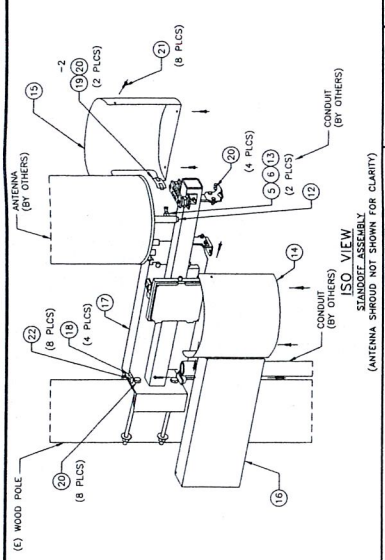
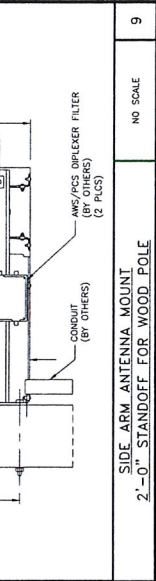
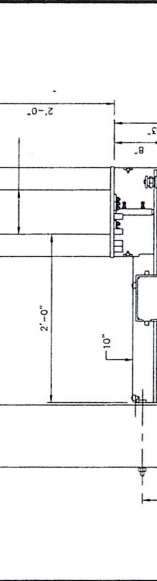
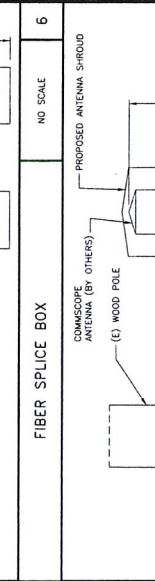
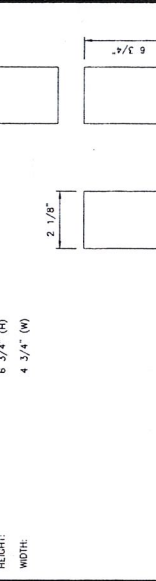


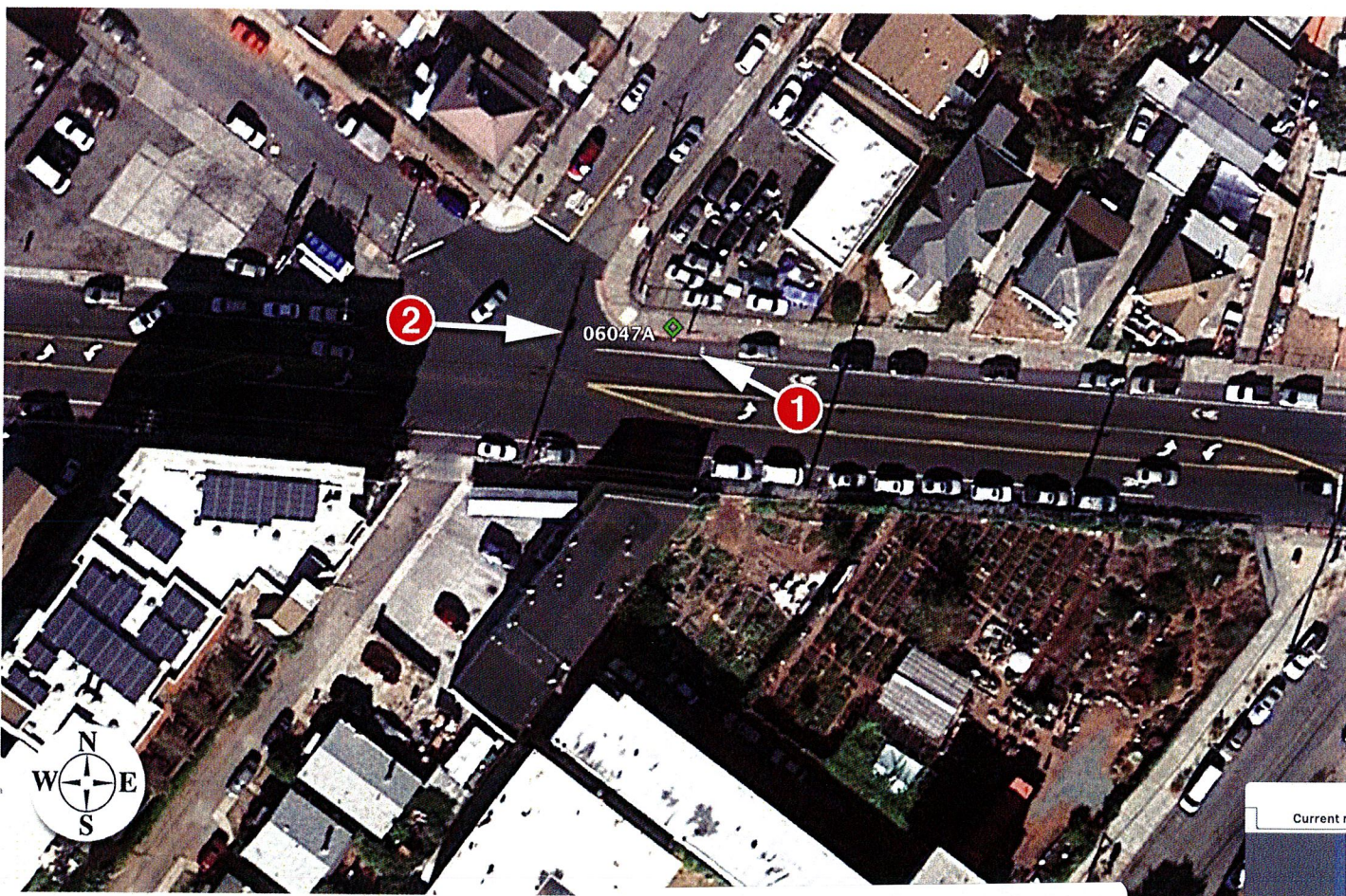
ITEM #	PART #	DESCRIPTION	QTY.	UNIT WT. (lbs)
1	WA-714	STANDOFF ARM ASSEMBLY PARTS/HORR	1	4.3
2	SS-314	3"x3/32"x1/8"x3"-2" STANDOFF ARM W/ MOUNT	2	0.5
3	SS-316	2"x2 1/2"x1/4"x2" ASS. ANGLE	2	0.4
4	15230	3/8"x1" 4307 FULLY THRD BOLT/TW CALV.	4	0.1
5	41010	3/8"x1" 4303-A HEX NUT/ TW CALV.	2	0.01
6	51000	3/8"x1" 4303-A HEX NUT/ CALV.	2	0.01
7	80228	3/8"x1" 4303 THRD ROD/ CALV.	1	0.19
8	PL-718	BUS BAR ASSEMBLY PARTS / HORR	1	0.8
9	43010	1/4"x2"x1/2" COPPER BUS BAR	4	0.01
10	71017	3/8"x5/8" FULLY THRD S.S. BOLT	4	0.04
11	90060	3/8" STANDOFF INSULATOR (CS9840)	2	0.1
12	WA-688	ANTENNA / EQUIPMENT MOUNT PARTS / HORR	1	2.2
13	18250F	3/8"x1 1/2" 4307 FULLY THRD BOLT/ CALV.	2	0.1
14	41010	3/8"x1 1/2" 4307 FULLY THRD BOLT/ CALV.	2	0.01
15	51000	3/8"x1 1/2" 4307 FULLY THRD BOLT/ CALV.	2	0.01
16	WA-715	SUB-ASSEMBLY PARTS / HORR	1	8
17	PL-154	1/4"x1 1/2" 304 S.S. FORMED PLATE W/ MOUNT	1	8
18	PL-154	1/4"x1 1/2" 304 S.S. FORMED PLATE W/ MOUNT	1	8.9
19	PL-154	1/4"x1 1/2" 304 S.S. FORMED PLATE W/ MOUNT	1	8.9
20	14284	1/2"x1 1/2" 304 S.S. FORMED PLATE	4	0.3
21	14284	1/2"x1 1/2" 304 S.S. FORMED PLATE	2	0.1
22	70217	1/4"-20 U-STILE SPEED NUT, BLACK PHOSPHATE	16	0.02
23	70217	1/4"x1 1/2" 304 FLAT BUTT-ND SORT CAP SCRW	16	0.02
24	70218	1/4"x1 1/4" 304 FLAT BUTT-ND SORT CAP SCRW	16	0.003

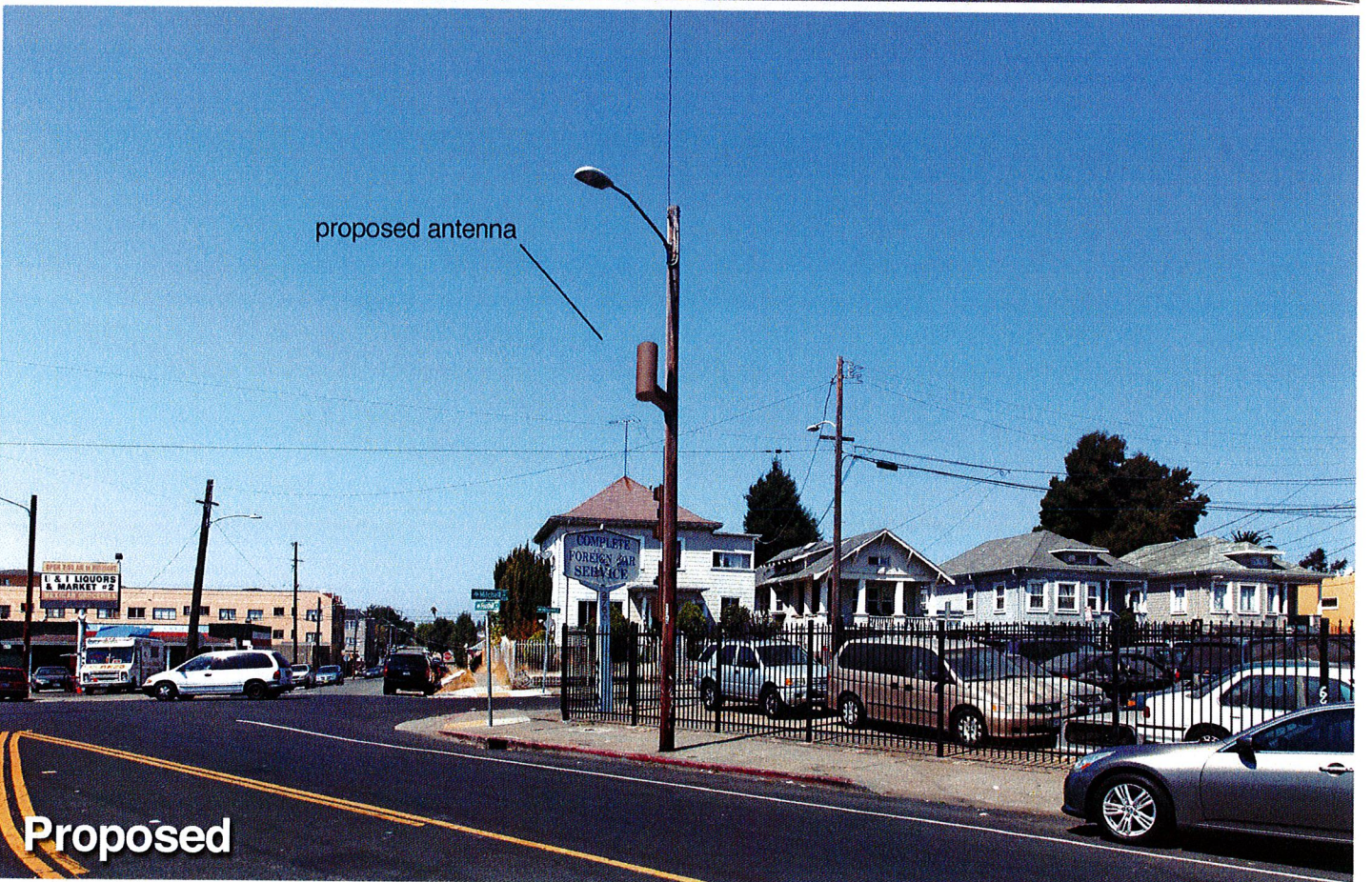
TOTAL CALV. WT. = 88lbs

ANTENNA SHROUD PARTS TABLE

ITEM #	PART #	DESCRIPTION	QTY.	UNIT WT. (lbs)
1	E1-4868	FSS FUSION SPLICE ENCLOSURE	1	NO SCALE
2	2 1/8" (D)	DEPTH	1	4 3/4"
3	6 3/4" (H)	HEIGHT	1	NO SCALE
4	4 3/4" (W)	WIDTH	1	NO SCALE







proposed antenna



Existing



Proposed



October 20, 2016

City Planner
Planning Department
City of Oakland
250 Frank Ogawa Plaza, 2nd Floor
Oakland, CA 94612

Re: **Proposed ExteNet Small Cell Node Installation**
Applicant: ExteNet Systems (California) LLC
Nearest Site Address: Public Right of Way near 2107 Church Street
Site ID: NW-CA-SANFRANMC Node 06277A
Latitude/Longitude: 37.765268, -122.184139

Dear City Planner,

On behalf of ExteNet Systems (California) LLC, this letter and attached materials are to apply for a design review permit to install a small cell node in the public right-of-way near 2107 Church Street ("Node 06277A").¹ The following is an explanation of the existing site, a project description of the designed facility, the project purpose and justifications in support of this proposal.

A. Project Description.

The proposed location for our facility currently consists of an approximate 38 foot tall wood utility pole in the public right-of-way on the west side of Church Street just southwest of the intersection with Arthur Street, at about 2107 Church Street. Power lines are on the pole at about 32 feet and 35 feet above ground and a transformer at about 33 feet.

ExteNet proposes to swap the pole for a new Class 2 pole measuring 38 feet above ground and to affix one canister antenna within an antenna shroud on a proposed antenna support. The antenna, measuring 23.5 inches long and 7.9 inches in diameter, will be placed on an antenna support arm attached at 18 feet. Two proposed diplexers measuring 6.4 inches long, 4.6 inches wide and 1.8 inches deep will be placed within the side arm antenna mount. Two MRRUs measuring 7.9 inches tall, 7.9 inches wide and 3.9 inches deep will be placed on the pole at 10 feet 6 inches and 13 feet 11 inches. A miniature emergency shut-off safety switch and electricity meter will be placed on the pole at about eight feet above ground. All equipment will be painted brown to match the utility pole. Our proposal is depicted in the attached design drawings and photographic simulations.

This is an unmanned facility that will operate at all times (24 hours per day, seven days per week) and will be serviced about once per year. Our proposal will greatly benefit the area by improving wireless telecommunications service as detailed below.

B. Project Purpose.

¹ ExteNet expressly reserves all rights concerning the city's jurisdiction to assert zoning regulation over the placement of wireless facilities in the public rights-of-way.

ExteneNet Systems
2000 Crow Canyon Place, Suite 210 • San Ramon, CA 94583
(415) 596-3474 • mvergovich@extenetsystems.com

The purpose of this project is to provide T-Mobile third and fourth generation (3G and 4G) wireless voice and data coverage to the surrounding area where there is currently a significant gap in service coverage. These wireless services include mobile telephone, wireless broadband, emergency 911, data transfers, electronic mail, Internet, web browsing, wireless applications, wireless mapping and video streaming. The proposed node is part of a larger small cell providing coverage to areas of Oakland that are otherwise very difficult or impossible to cover using traditional macro wireless telecommunications facilities due to the local topography and mature vegetation. The attached radio frequency propagation maps depict T-Mobile's larger small cell project. Further radio frequency details are set forth in the attached Radio Frequency Statement, including propagation maps depicting existing and proposed coverage in the vicinity of Node 06277A.

A small cell network consists of a series of radio access nodes connected to small telecommunications antennas, typically mounted on existing wooden utility poles within the public rights-of-way, to distribute wireless telecommunications signals. Small cell networks provide telecommunications transmission infrastructure for use by wireless services providers. These facilities allow service providers such as T-Mobile to establish or expand their network coverage and capacity. The nodes are linked by fiber optic cable that carry the signal stemming from a central equipment hub to a node antenna. Although the signal propagated from a node antenna spans over a shorter range than a conventional tower system, small cell can be an effective tool to close service coverage gaps.

C. Project Justification, Alternative Site and Design Analysis.

Node 06277A is an integral part of the overall small cell project, and it is located in a difficult coverage area near Avenal Avenue. The coverage area consists of a primarily residential neighborhood off of Church Street, Arthur Street, Avenal Avenue, and surrounding areas. Node 06277A will cover transient traffic along the roadways and provide in-building service to the surrounding residences as depicted in the propagation maps, which are exhibits to the attached Radio Frequency Statement.

Based on ExteNet's analysis of alternative sites the currently proposed Node 06277A is the least intrusive means to close T-Mobile's significant service coverage gap in the area. Node 06277A best uses existing utility infrastructure, adding small equipment without disturbing the character of the neighborhoods served. Deploying a small cell node at an existing pole location minimizes any visual impact by utilizing an inconspicuous spot. By installing antennas and equipment at this existing pole location, T-Mobile does not need to propose any new infrastructure in this coverage area.

The small cell node RF emissions are also much lower than the typical macro site, they are appropriate for the area, and they are fully compliant with the FCC's requirements for limiting human exposure to radio frequency energy. The attached radio frequency engineering analysis provided by Hammett & Edison, Inc., Consulting Engineers, confirms that the proposed equipment will operate well within (and actually far below) all applicable FCC public exposure limits. The facility will also comply with California Public Utility Commission (CPUC) General Orders 95 (concerning overhead line design, construction and maintenance) and 170 (CEQA review) that govern utility use in the public right-of-way.

This proposed redesign is a viable design developed according to our discussions with the Planning Department. As discussed with City Planning, Node 06277A is the least intrusive option. Also the proposed location is a good coverage option because it sits at a spot from which point T-Mobile can adequately propagate its wireless signal.

ExteNet considered alternative sites on other utility poles in this area but none of these sites is as desirable from construction, coverage or aesthetics perspectives. The proposed location is approximately equidistant from other small cell nodes that ExteNet plans to place in surrounding hard-to-reach areas, so that service coverage can be evenly distributed. The proposed facility is not in the path of any protected view sheds. The other utility poles in the area are more conspicuous than the proposed pole. In addition to the utility pole proposed to host Node 06277A, ExteNet considered alternative sites set forth in the attached Alternative Site Analysis.

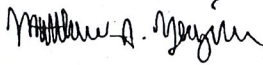
Alternative designs were considered including placing equipment inside of a ground-mounted cabinet. However, the pole-mounted equipment would better suit the area because it would blend in with the pole. We also evaluated whether equipment could be undergrounded but unfortunately this is not possible because there is insufficient right-of-way space for the necessary equipment access and the equipment would be compromised from saturation by rainwater. The antennas cannot be undergrounded because they rely on a line-of-sight in order to properly transmit a signal.

Drawings, propagation maps, photographic simulations, and a radio-frequency engineering analysis are included with this packet.

As this application seeks authority to install a wireless telecommunication facility, the FCC's Shot Clock Order² requires the city to issue its final decision on ExteNet's application within 150 days. We respectfully request expedited review and approval of this application. Feel free to contact me if you have any questions. Thank you.

Thank you.

Best Regards,
EXTENET SYSTEMS



Matthew S. Yergovich

² See Petition for Declaratory Ruling to Clarify Provisions of Section 332(c)(7)(B), WT Docket No. 08-165, Declaratory Ruling, 24 F.C.C.R. 13994 (2009).



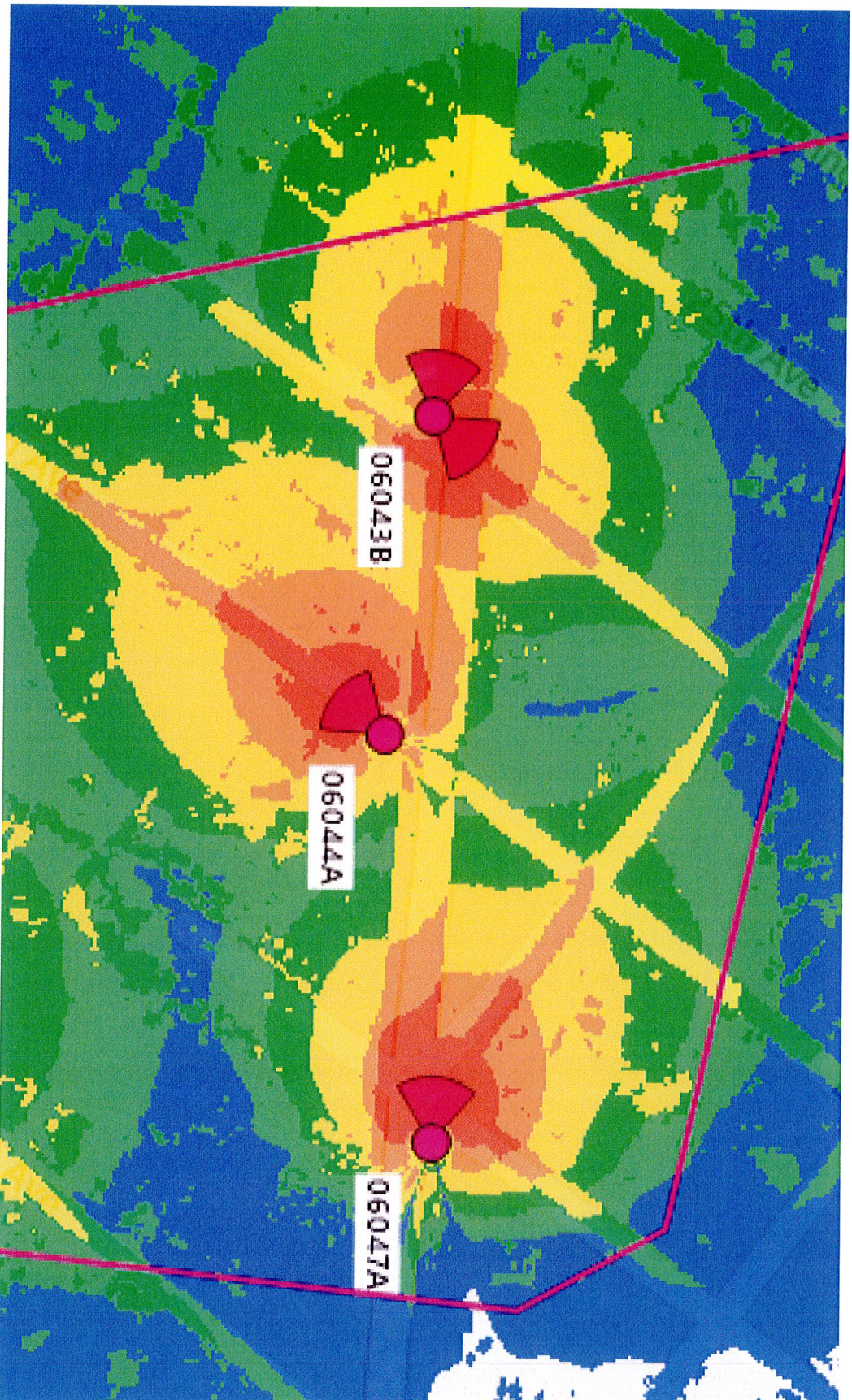
EXTENET OAKLAND NODE 06047A ALTERNATIVE SITE ANALYSIS

MAP OF ALTERNATIVE POLES EVALUATED FOR NODE 06047A



- The above maps depict ExteneNet's proposed Node 06047A in relation to other poles in the area that were evaluated as possibly being viable alternative candidates.
- The following is an analysis of each of those 3 alternative locations.

PROPAGATION MAP OF NODES 06047A



This propagation map depicts the ExtNet proposed Node 06047A in relation to surrounding proposed ExtNet small cell nodes.

06047A - PROPOSED LOCATION



- The location for ExteNet's proposed Node 06047A is a joint utility pole located adjacent to PROW at 2750 Foothill Boulevard (37.784507, - 122.226603).
- ExteNet's objective is to provide T-Mobile 4G wireless coverage and capacity to the Oakland area.
- ExteNet evaluated this site and nearby alternatives to verify that the selected site is the least intrusive means to close T-Mobile's significant service coverage gap.

ALTERNATIVE NODE 06047B



- Node 06047B is a joint utility pole next to 2710 Foothill Oakland (U & I Liquors & Market # 2)
- This pole is not a viable alternative candidate because the existing pole does not have power nor telco in order to facilitate our proposed wireless installation. The existing pole will need to be replaced by a taller pole.
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 06044A.

ALTERNATIVE NODE 06047C



- Node 06047C is a joint utility pole at 2701 East 20th Street (Corner of Foothill & E. 20th Street. By Stop Sign), (37.784592, -122.227042)
- This pole is not a viable alternative candidate because the existing pole does not have power in order to facilitate our proposed wireless installation. The existing pole will need to be replaced by a taller pole.
- This pole is not a viable alternative candidate because this pole is located too close to primary Node 06044A.

ALTERNATIVE NODE 06047D



- Node 06047D is a joint utility pole near Across 2007 Mitchell Street (37.784614, - 122.226564).
- This pole is not a viable alternative because the minimum antenna height needed at this pole would violate CPUC General Order-94 Regulation safety clearances. This configuration does not allow ExteneT the proper 2' of separation from the communication lines. The existing pole will need to be replaced by a taller pole.

ALTERNATIVE SITE ANALYSIS CONCLUSION

Based on ExteneNet's analysis of alternative sites, the currently proposed Node 06047A is the least intrusive location from which to fill the surrounding significant wireless coverage gaps.



extenet
SM
SYSTEMS

Thank You!

**ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 06047A)
2750 Foothill Boulevard • Oakland, California**

Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained on behalf of ExteNet Systems CA, LLC, a wireless telecommunications carrier, to evaluate the addition of Node No. 06047A to be added to the ExteNet distributed antenna system (“DAS”) in Oakland, California, for compliance with appropriate guidelines limiting human exposure to radio frequency (“RF”) electromagnetic fields.

Executive Summary

ExteNet proposes to install a directional panel antenna on a light pole sited in the public right-of-way at 2750 Foothill Boulevard in Oakland. The proposed operation will comply with the FCC guidelines limiting public exposure to RF energy.

Prevailing Exposure Standards

The U.S. Congress requires that the Federal Communications Commission (“FCC”) evaluate its actions for possible significant impact on the environment. A summary of the FCC’s exposure limits is shown in Figure 1. These limits apply for continuous exposures and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. The most restrictive FCC limit for exposures of unlimited duration to radio frequency energy for several personal wireless services are as follows:

Wireless Service	Frequency Band	Occupational Limit	Public Limit
Microwave (Point-to-Point)	5,000–80,000 MHz	5.00 mW/cm ²	1.00 mW/cm ²
BRS (Broadband Radio)	2,600	5.00	1.00
AWS (Advanced Wireless)	2,100	5.00	1.00
PCS (Personal Communication)	1,950	5.00	1.00
Cellular	870	2.90	0.58
SMR (Specialized Mobile Radio)	855	2.85	0.57
700 MHz	700	2.35	0.47
[most restrictive frequency range]	30–300	1.00	0.20

General Facility Requirements

Base stations typically consist of two distinct parts: the electronic transceivers (also called “radios” or “channels”) that are connected to the traditional wired telephone lines, and the passive antennas that send the wireless signals created by the radios out to be received by individual subscriber units. The transceivers are often located at ground level and are connected to the antennas by coaxial cables. A small antenna for reception of GPS signals is also required, mounted with a clear view of the sky. Because of the short wavelength of the frequencies assigned by the FCC for wireless services, the antennas require line-of-sight paths for their signals to propagate well and so are installed at some

**ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 06047A)
2750 Foothill Boulevard • Oakland, California**

height above ground. The antennas are designed to concentrate their energy toward the horizon, with very little energy wasted toward the sky or the ground. This means that it is generally not possible for exposure conditions to approach the maximum permissible exposure limits without being physically very near the antennas.

Computer Modeling Method

The FCC provides direction for determining compliance in its Office of Engineering and Technology Bulletin No. 65, "Evaluating Compliance with FCC-Specified Guidelines for Human Exposure to Radio Frequency Radiation," dated August 1997. Figure 2 attached describes the calculation methodologies, reflecting the facts that a directional antenna's radiation pattern is not fully formed at locations very close by (the "near-field" effect) and that at greater distances the power level from an energy source decreases with the square of the distance from it (the "inverse square law"). The conservative nature of this method for evaluating exposure conditions has been verified by numerous field tests.

Site and Facility Description

Based upon information provided by ExteNet, including drawings by Black & Veatch Corporation, dated September 27, 2016, it is proposed to install one CommScope Model 3X-V65S-GC3-3XR, 2-foot tall, tri-directional cylindrical antenna, with one direction activated, on a cross-arm to be added to a wood light pole sited in the public right-of-way in front of the building located at 2750 Foothill Boulevard in Oakland. The antenna would employ no downtilt, would be mounted at an effective height of about 20 feet above ground, and its principal direction would be oriented toward 275°T. T-Mobile proposes to operate from this facility with a maximum effective radiated power in any direction of 214 watts, representing simultaneous operation 107 watts for AWS and 107 watts for PCS service. There are reported no other wireless telecommunications base stations at this site or nearby.

Study Results

For a person anywhere at ground, the maximum RF exposure level due to the proposed T-Mobile operation is calculated to be 0.0046 mW/cm², which is 0.46% of the applicable public exposure limit. The maximum calculated level at the second-floor elevation of any nearby building is 0.52% of the public exposure limit. It should be noted that these results include several "worst-case" assumptions and therefore are expected to overstate actual power density levels from the proposed operation.

Recommended Mitigation Measures

Due to its mounting location and height, the ExteNet antenna would not be accessible to the general public, and so no mitigation measures are necessary to comply with the FCC public exposure guidelines. To prevent occupational exposures in excess of the FCC guidelines, it is recommended



**ExteNet Systems CA, LLC • Proposed DAS Node (Site No. 06047A)
2750 Foothill Boulevard • Oakland, California**

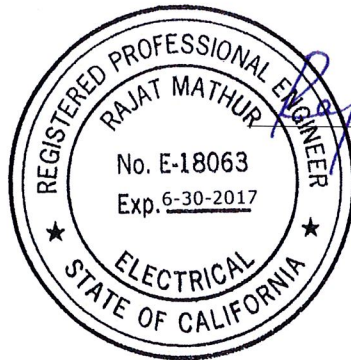
that appropriate RF safety training be provided to all authorized personnel who have access to the antenna, including employees and contractors of the utility companies. No access within 2 feet directly in front of the antenna itself, such as might occur during certain activities, should be allowed while the base station is in operation, unless other measures can be demonstrated to ensure that occupational protection requirements are met. Posting explanatory signs* on the pole at or below the antenna, such that the signs would be readily visible from any angle of approach to persons who might need to work within that distance, would be sufficient to meet FCC-adopted guidelines.

Conclusion

Based on the information and analysis above, it is the undersigned's professional opinion that operation of the node proposed by ExteNet Systems CA, LLC, at 2750 Foothill Boulevard in Oakland, California, will comply with the prevailing standards for limiting public exposure to radio frequency energy and, therefore, will not for this reason cause a significant impact on the environment. The highest calculated level in publicly accessible areas is much less than the prevailing standards allow for exposures of unlimited duration. This finding is consistent with measurements of actual exposure conditions taken at other operating base stations. Training personnel and posting signs is recommended to establish compliance with occupational exposure limitations.

Authorship

The undersigned author of this statement is a qualified Professional Engineer, holding California Registration No. E-18063, which expires on June 30, 2017. This work has been carried out under his direction, and all statements are true and correct of his own knowledge except, where noted, when data has been supplied by others, which data he believes to be correct.



Rajat Mathur
Rajat Mathur, P.E.
707/996-5200

October 10, 2016

* Signs should comply with OET-65 color, symbol, and content recommendations. Contact information should be provided (e.g., a telephone number) to arrange for access to restricted areas. The selection of language(s) is not an engineering matter, and guidance from the landlord, local zoning or health authority, or appropriate professionals may be required.

RFR.CALC™ Calculation Methodology

Assessment by Calculation of Compliance with FCC Exposure Guidelines

The U.S. Congress required (1996 Telecom Act) the Federal Communications Commission (“FCC”) to adopt a nationwide human exposure standard to ensure that its licensees do not, cumulatively, have a significant impact on the environment. The maximum permissible exposure limits adopted by the FCC (see Figure 1) apply for continuous exposures from all sources and are intended to provide a prudent margin of safety for all persons, regardless of age, gender, size, or health. Higher levels are allowed for short periods of time, such that total exposure levels averaged over six or thirty minutes, for occupational or public settings, respectively, do not exceed the limits.

Near Field.

Prediction methods have been developed for the near field zone of panel (directional) and whip (omnidirectional) antennas, typical at wireless telecommunications base stations, as well as dish (aperture) antennas, typically used for microwave links. The antenna patterns are not fully formed in the near field at these antennas, and the FCC Office of Engineering and Technology Bulletin No. 65 (August 1997) gives suitable formulas for calculating power density within such zones.

For a panel or whip antenna, power density $S = \frac{180}{\theta_{BW}} \times \frac{0.1 \times P_{net}}{\pi \times D \times h}$, in mW/cm²,

and for an aperture antenna, maximum power density $S_{max} = \frac{0.1 \times 16 \times \eta \times P_{net}}{\pi \times h^2}$, in mW/cm²,

where θ_{BW} = half-power beamwidth of the antenna, in degrees, and

P_{net} = net power input to the antenna, in watts,

D = distance from antenna, in meters,

h = aperture height of the antenna, in meters, and

η = aperture efficiency (unitless, typically 0.5-0.8).

The factor of 0.1 in the numerators converts to the desired units of power density.

Far Field.

OET-65 gives this formula for calculating power density in the far field of an individual RF source:

power density $S = \frac{2.56 \times 1.64 \times 100 \times RFF^2 \times ERP}{4 \times \pi \times D^2}$, in mW/cm²,

where ERP = total ERP (all polarizations), in kilowatts,

RFF = relative field factor at the direction to the actual point of calculation, and

D = distance from the center of radiation to the point of calculation, in meters.

The factor of 2.56 accounts for the increase in power density due to ground reflection, assuming a reflection coefficient of 1.6 (1.6 x 1.6 = 2.56). The factor of 1.64 is the gain of a half-wave dipole relative to an isotropic radiator. The factor of 100 in the numerator converts to the desired units of power density. This formula has been built into a proprietary program that calculates, at each location on an arbitrary rectangular grid, the total expected power density from any number of individual radiation sources. The program also allows for the description of uneven terrain in the vicinity, to obtain more accurate projections.





November 30, 2016

City Planner
Planning Department
City of Oakland
250 Frank H. Ogawa Plaza, 2nd Floor
Oakland, CA 94612

Re: **GO 95 Required Two Feet Clearance Between Antenna and Pole**
Applicant: ExteNet Systems (California) LLC
Nearest Site Address: Public Right of Way near 2107 Church Street
Site ID: NW-CA-SANFRNMC-TMO Node 06277A
Latitude/Longitude: 37.765268, -122.184139

Dear City Planner,

This letter is in response to discussions with City of Oakland Planning Department seeking clarification on the proposed antenna placement on the utility pole.

Wireless facility attachments to utility poles must comply with CPUC General Order 95 design, safety and clearance standards. Specifically, Rule 94.4(B) states: *Antennas shall maintain a 2 ft horizontal clearance from centerline of pole when affixed between supply and communication lines or below communication lines.* This rule precludes ExteNet from placing the antennas flush mounted to the utility pole when there is a power source attached to the pole. ExteNet minimized the clearance as much as possible by placing the antenna shroud just over two feet from the centerline of the utility pole.

Feel free to contact me if you have any questions. Thank you.

Thank you.

Best Regards,

Ana Gomez/BV for ExteNet

Ana Gomez
ExteNet Permitting Contractor



ATTACHMENT H